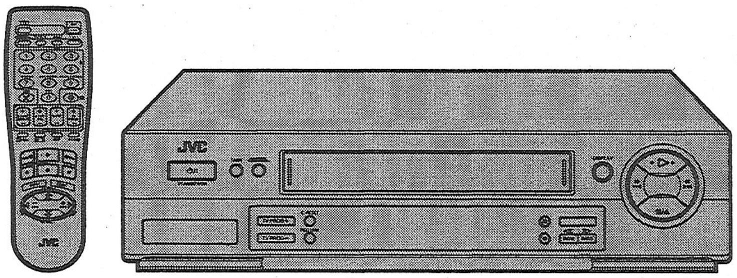
V24567

JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S6600EU/S6611EU



Hi-Fi S-VHS 625
ShowView®

SPECIFICATIONS

GENERAL

Power requirement : AC 220 – 240 V∿, 50/60 Hz
Power consumption
  Power on : 24 W
  Power off : 5.5 W
Temperature
  Operating : 5°C to 40°C
  Storage : –20°C to 60°C
Operating position : Horizontal only
Dimensions (WxHxD) : 400 x 94 x 347 mm
Weight : 4.0 kg
Format : S-VHS/VHS PAL standard
Maximum recording time
  (SP) : 240 min. with E-240 video cassette
  (LP) : 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields
Recording system : DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio : 45 dB
Horizontal resolution : 250 lines (VHS)
  400 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
  20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output : 21-pin SCART connectors :
  IN/OUT x 1, IN/DECODER x 1
  RCA connectors:
  AUDIO IN x 1, AUDIO OUT x 1
  S-Video connectors:
  IN x 1, OUT x 1

TUNER/TIMER

TV channel storage capacity : 99 positions (+AUX position)
Tuning system : Frequency synthesized tuner
Channel coverage : VHF 47 – 89/104 – 300/
  302 – 470MHz
  UHF 470 – 862MHz
Aerial output : UHF channels 22 – 69 (Adjustable)
Memory backup time : Approx. 10 min.

ACCESSORIES

Provided accessories : RF cable,
  Infrared remote control unit,
  "R6" battery x 2

Specifications shown are for SP mode unless otherwise specified. E.& O.E. Design and specifications subject to change without notice.

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The following table lists the differing point between Models (HR-S6600EU and HR-S6611EU) in this series.

	HR-S6600EU	HR-S6611EU
COSMETIC (FRONT PANEL)	CHAMPAGNE	BLACK

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▒) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts.
   Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

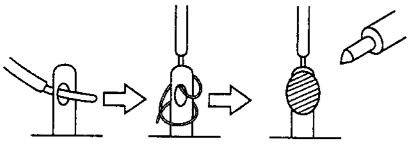


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

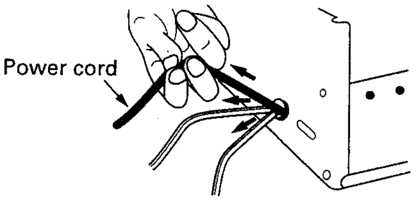


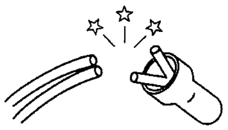
Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).



cut close to connector

Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

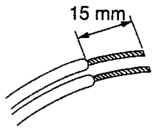


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

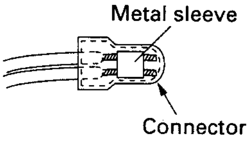


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

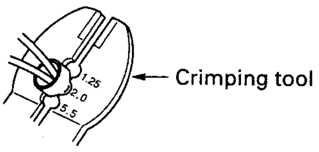


Fig.6

(5) Check the four points noted in Fig.7.

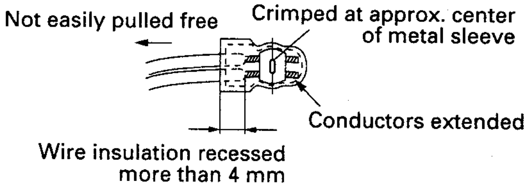

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

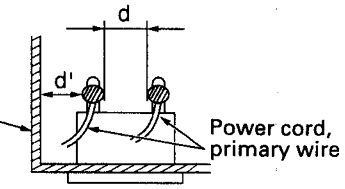


Fig. 8

4. **Leakage current test**
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)
Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

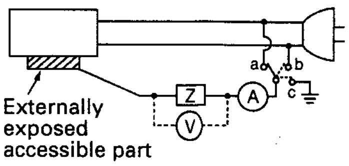


Fig. 9

5. **Grounding (Class I model only)**
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

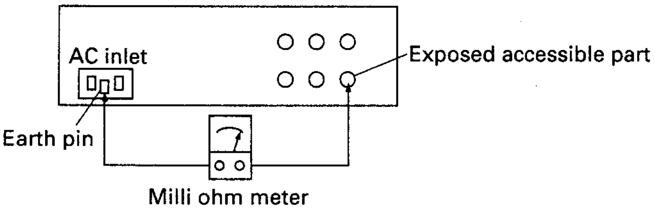


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

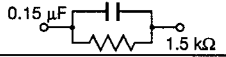
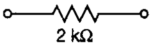
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION

- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING

There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).

1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

IMPORTANT

- Please read the various precautions on page 2 and 3 before installing or operating the recorder.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

S-VHS 625 SHOWVIEW®

- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".
- ShowView is a registered trademark of Gemstar Development Corporation. The ShowView system is manufactured under licence from Gemstar Development Corporation.

For Italy:
"It is declared that this product, brand JVC, conforms to the Ministry Decree n. 548 of 28 Aug.'95 published in the Official Gazette of the Italian Republic n. 301 of 28 Dec.'95"

The STANDBY/ON ⏻/I button does not completely shut off mains power from the unit, but switches operating current on and off. " ⏻ " shows electrical power standby and " I " shows ON.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

Failure to heed the following precautions may result in damage to the recorder, remote control or video cassette.

1. **DO NOT place the recorder . . .**
   ... in an environment prone to extreme temperatures or humidity.
   ... in direct sunlight.
   ... in a dusty environment.
   ... in an environment where strong magnetic fields are generated.
   ... on a surface that is unstable or subject to vibration.
2. **DO NOT block the recorder's ventilation openings.**
3. **DO NOT place heavy objects on the recorder or remote control.**
4. **DO NOT place anything which might spill on top of the recorder or remote control.**
5. **AVOID violent shocks to the recorder during transport.**

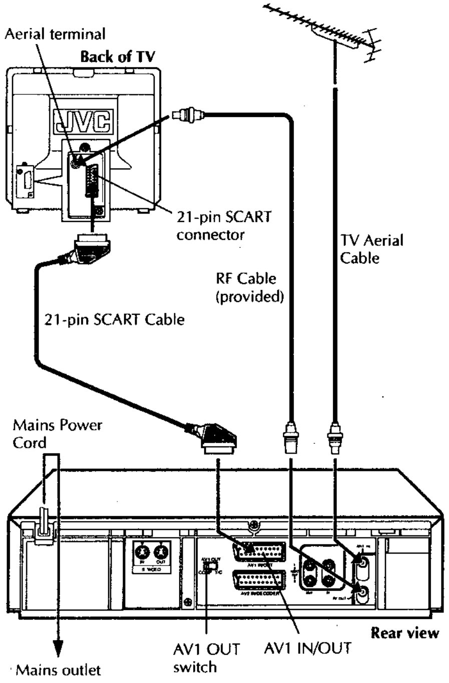
MOISTURE CONDENSATION

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form in the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder turned on for a few hours to let the moisture dry.

ABOUT HEAD CLEANING

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Be sure to contact your nearest JVC dealer if such troubles occur.

Basic Connections



It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.

1

CHECK CONTENTS

Make sure the package contains all of the accessories listed in "Specifications" (☞ pg. 61).

2

SITUATE RECORDER

Place the recorder on a stable, horizontal surface.

3

CONNECT RECORDER TO TV

The connection method you use depends on the type of TV you have.

RF CONNECTION

- *To Connect To A TV With NO AV Input Terminals . . .*
  a– Disconnect the TV aerial cable from the TV.
  b– Connect the TV aerial cable to the ANT. IN jack on the rear panel of the recorder.
  c– Connect the provided RF cable between the RF OUT jack on the rear panel of the recorder and the TV's aerial terminal.

AV CONNECTION

- *To Connect To A TV With AV Input Terminals . . .*
  a– Connect the aerial, recorder and TV as per "RF CONNECTION".
  b– Connect an optional SCART cable between the AV1 IN/OUT socket on the rear panel of the recorder and the TV's 21-pin SCART connector.
  c– Set the AV1 OUT switch to the appropriate position. See "AV1 INPUT/OUTPUT SIGNAL SELECTION FOR AV CONNECTION" below.

4

CONNECT RECORDER TO MAINS

Plug the end of the mains power cord into a mains outlet.

Make AV connection if your TV has a 21-pin AV input connector (SCART) in order to reduce the possibility of interference. And if you are using a stereo TV, you will need this cable in order to enjoy stereo playback of videotapes.

After you plug the mains power cord into a mains outlet, the Country Set display appears on the TV screen and/or on the recorder's front display panel when the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder; go to page 6 to perform Auto Set Up.

AV1 INPUT/OUTPUT SIGNAL SELECTION FOR AV CONNECTION

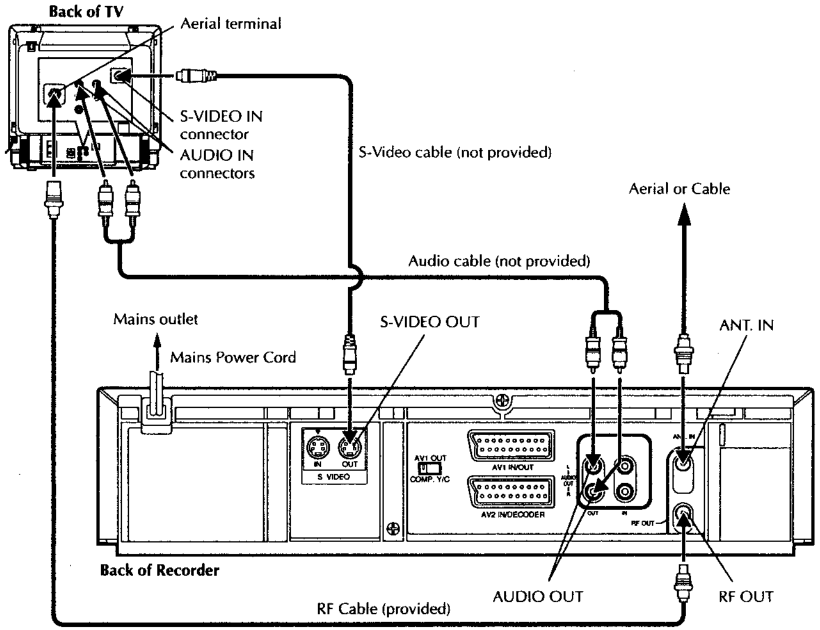
The AV1 IN/OUT connector accepts and delivers either a composite signal (regular video signal) or a Y/C signal (a signal in which the luminance and chrominance signals are separated). For input signal selection, select "VIDEO" (regular video signal) or "S-VIDEO" (Y/C signal) for "AV1 SELECT" setting (☞ pg. 38). For output signal selection, use **AV1 OUT** switch of the rear panel.

- If your TV's 21-pin AV input connector (SCART) is compatible only with the regular video signal, set this switch to COMP.
- If your TV's 21-pin AV input connector (SCART) is compatible with the Y/C signal, set this switch to Y/C. You can obtain high-quality S-VHS pictures. (For connection, be sure to use a 21-pin SCART cable that is compatible with the Y/C signal.)

NOTES:

- *Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.*
- *For switching the TV's mode, refer to the instruction manual of your television.*
- *To obtain high-quality S-VHS pictures, you can also use the S-VIDEO CONNECTION described on page 5.*

S-VIDEO Connection



- *To Connect to A TV With S-VIDEO/AUDIO IN Connectors . . .*

1

CONNECT RECORDER TO TV

a– Connect the aerial, recorder and TV as per "RF CONNECTION" (☞ pg. 4).
b– Connect the recorder's S-VIDEO OUT connector to the TV's S-VIDEO IN connector.
c– Connect the recorder's AUDIO OUT connectors to the TV's AUDIO IN connectors.

2

CONNECT RECORDER TO MAINS

Plug the end of the mains power cord into a mains outlet.

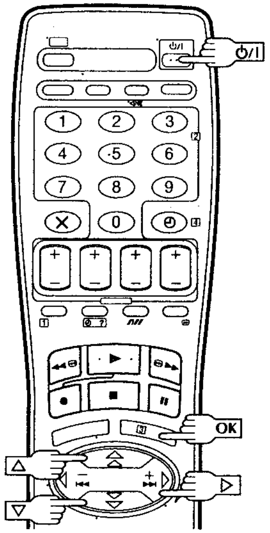
NOTES:

- *You can obtain high-quality S-VHS pictures.*
- *If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction. (☞ pg. 43)*
- *To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).*
- *For switching the TV's mode, refer to the instruction manual of your television.*

After you plug the mains power cord into a mains outlet, the Country Set display appears on the TV screen and/or on the recorder's front display panel when the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder; go to page 6 to perform Auto Set Up.

Auto Set Up

Auto Channel Set/Auto Clock Set/Auto Guide Program Number Set



International Telephone Country Code			
BELGIUM	: 32	NORGE	: 47
ČESKÁ REPUBLIKA	: 42	ÖSTERREICH	: 43
DANMARK	: 45	POLSKA	: 48
DEUTSCHLAND	: 49	PORTUGAL	: 351
ESPAÑA	: 34	SUISSE	: 41
GREECE	: 30	SUOMI	: 358
ITALIA	: 39	SVERIGE	: 46
MAGYARORSZÁG	: 36	OTHER WESTERN EUROPE	: - -
NEDERLAND	: 31	OTHER EASTERN EUROPE	: EE

ATTENTION

Once you have performed Auto Set Up, even if the recorder's memory backup has expired, all the stored stations and their Guide Program numbers remain in the recorder's memory and the recorder will not perform Auto Set Up again. You only need to set the clock. (☞ pg. 52)

If you have moved to a different area, perform each setting as required.

- Video Channel setting (for RF connection users) ☞ pg. 51
- Tuner setting ☞ pg. 44
- Clock setting ☞ pg. 52

If a new station starts broadcasting in your area, perform tuner setting (☞ pg. 44) and, if necessary, video channel setting (☞ pg. 51).

When the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder after you plug the mains power cord into a mains outlet, the Country Set display will appear on the TV screen and the recorder's front display panel. By simply selecting your country*, the Auto Set Up function sets the tuner channels, clock** and Guide Program numbers automatically.

* If you live in Belgium (BELGIUM) or Switzerland (SUISSE), you also need to select your language.

** If you live in Hungary (MAGYARORSZAG), Czech Republic (CESKA REPUBLIKA), Poland (POLSKA) or other countries in Eastern Europe (OTHER EASTERN EUROPE), set the clock manually.

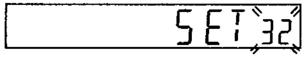
You can refer to the front display panel and/or the on-screen display to perform this procedure.

Before starting, make sure of the following:

- The TV aerial cable should be connected to the recorder.
- The recorder's mains power cord should be connected to a mains outlet.
- If you want to use the on-screen display, the TV should be set to its AV mode (with AV or S-VIDEO connection ☞ pg. 4 or 5) or UHF channel 36 (with RF connection ☞ pg. 4).

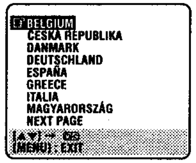
1 TURN ON THE RECORDER

Press ⏻/I on the recorder or remote control. The Country Set display appears on the front display panel and/or on the screen.



NOTE:

If you have connected your TV to the recorder with RF connection and the on-screen display appearing on UHF channel 36 looks distorted, perform "Video Channel Set" on page 51.

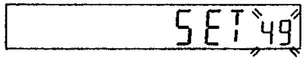


2 SELECT COUNTRY

If you are referring to the front display panel

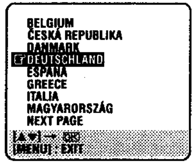
Press △▽ to select your international telephone country code of your country referring to the chart in the left column.

(Ex.) DEUTSCHLAND is selected



If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to your country's name.



NOTE:

*If you have selected BELGIUM (32) or SUISSE (41), go to step 3. If you have selected MAGYARORSZAG (36), CESKA REPUBLIKA (42), POLSKA (48) or OTHER EASTERN EUROPE (EE), press **OK**. The Clock Set screen will appear. Set the clock manually (☞ pg. 52 – 53), then go to step **4**. If you have selected any other country name (code), go to step **4**.*

3 SELECT LANGUAGE

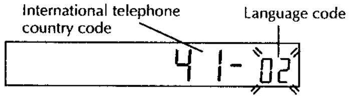
Press **OK**. The Language Set display appears on the front display panel and/or on the screen.

If you are referring to the front display panel

Press △▽ to select your language code.

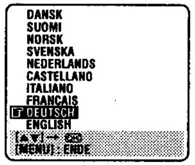
Language Code			
ENGLISH	: 01	NEDERLANDS	: 06
DEUTSCH	: 02	SVENSKA	: 07
FRANCAIS	: 03	NORSK	: 08
ITALIANO	: 04	SUOMI	: 09
CASTELLANO	: 05	DANSK	: 10

(Ex.) DEUTSCH is selected for SUISSE



If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to the language of your choice.



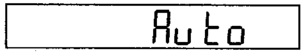
(Ex.) DEUTSCH is selected

4 PERFORM AUTO SET UP

Press **OK**.

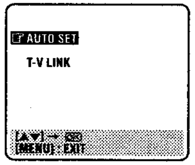
If you are referring to the front display panel

Press △▽ to select "Auto" and press **OK** or ▷.



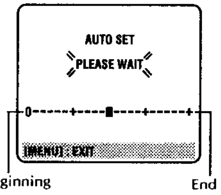
If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to "AUTO SET" and press **OK** or ▷.



"Auto" blinks on the display panel; do NOT press any button on the recorder or remote control until the display panel shows either the display as illustrated on page 9 or "– –:– –".

- If you are using the on-screen display, the AUTO SET screen will appear. As Auto Set Up progresses, the "■" mark on the screen moves from left to right.



- If "– –:– –" appears on the display panel, refer to page 9.

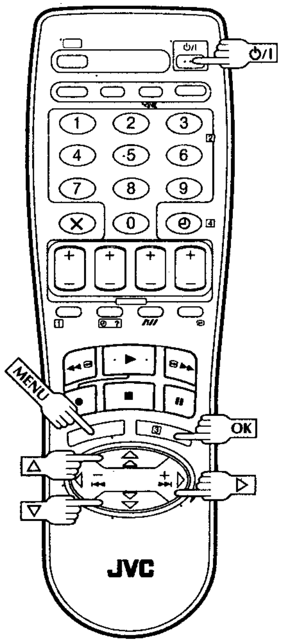
NOTES:

- *Auto channel set function takes place first; it assigns automatically all receivable stations in your area.*
- *Auto clock set function sets the clock automatically by reading the clock setting data from a station transmitting a PDC signal while auto channel set is being performed.*
- *During auto channel set, the recorder recognizes each station name of the detected stations and stores them in the recorder's memory, then automatically sets ShowView assigned Guide Program number for those stations according to the broadcast area.*
- *In the area where no TV station transmits a PDC signal, the recorder can perform neither auto clock set nor auto Guide Program number set.*
- *If there is a power cut, or if you press ⏻/I or **MENU** while Auto Set Up is in progress, Auto Set Up will be interrupted; be sure to turn off the recorder power once and try again from step **1**.*
- *Auto clock may not function properly depending on the reception condition.*

Preset Download

You can use this function only with the TV offering T-V Link, etc.*

** Compatible with TVs offering T-V Link, EasyLink, Megalogic, SMARTLINK, Q-Link, DATA LOGIC or NEXTVIEWLINK via fully-wired 21-pin SCART cable. The degree of compatibility and available functions may differ by system.*



NOTES:

- *In the area where no TV station transmits a PDC signal, the recorder can perform neither auto clock set nor auto Guide Program number set.*
- *If there is a power cut, or if you press ⏻/I or **MENU** while downloading or set up is in progress, it will be interrupted; be sure to turn off the recorder power once and try again from the beginning.*
- *Auto clock may not function properly depending on the reception condition.*
- *When you perform T-V LINK function, be sure to use fully-wired 21-pin SCART cable.*
- *On this recorder, the characters available for station's name (ID) are A–Z, 0–9, –, ✱, + and ␣ (space). Some downloaded station's name may differ from those of your TV (☞ pg. 48).*

When you connect the recorder and your TV via fully-wired 21-pin SCART cable (☞ pg. 4), you can set the recorder's tuner channels by downloading preset data from your TV instead of using the Auto Set Up function (☞ pg. 6). After downloading is completed, the recorder sets the clock and Guide Program number automatically. For details, refer to the instruction manual for your TV.

Perform steps **1** to **3** of "Auto Set Up" on page 6 and 7 before continuing.

1 PERFORM PRESET DOWNLOAD

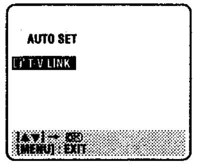
Press **OK**.

If you are referring to the front display panel

Press △▽ to select "CH – –" and press **OK** or ▷.

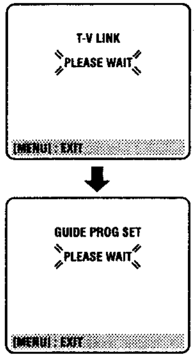
If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to "T-V LINK" and press **OK** or ▷.



Preset position on the display panel increases from "CH1"; do NOT press any button on the recorder or remote control until the display panel shows either the display as illustrated on page 9 or "– –:– –".

- If "– –:– –" appears on the display panel, refer to page 9.
- If you are using the on-screen display, the T-V LINK screen will appear. Then the GUIDE PROG SET screen will appear during Guide Program number set.
- If you press any button on the recorder or remote control while downloading is in progress, it will be interrupted.

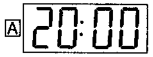


2 SET VIDEO CHANNEL

Set the Video Channel to off manually. (☞ pg. 51)

Results of Auto Set Up/Preset Download appear on the front display panel

A

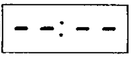


When both auto channel set and auto clock set have been completed successfully the correct current time will be displayed after the **OK** button is pressed in step **4** on page 7 or in step **1** on page 8.

B

When auto channel set has been completed successfully but auto clock set has not, "1" (channel position) will be displayed after the **OK** button is pressed in step **4** on page 7 or in step **1** on page 8.

C



When neither auto channel set nor auto clock set has been completed successfully, "– –:– –" will be displayed.

You can check if the Guide Program numbers have been set correctly when you perform ShowView Timer Programming (☞ pg. 26); if the correct channel position number is displayed in step **3**, this confirms that the Guide Program number for the ShowView number you enter in step **2** has been set correctly.

A If both auto channel set and auto clock set have been performed successfully:

1 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 49) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 46 – 50.

B If auto channel set has succeeded but auto clock set has not:

1 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 49) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 46 – 50.

2 Perform "Clock Set" on page 52.

C If both auto channel set and auto clock set have failed:

1 Make sure the TV aerial cable is connected properly to the recorder and turn off the recorder power once, then turn the recorder power back on again.
- The Country Set display appears on the front display panel and/or on the screen; perform steps **2 – 4** on pages 6 – 7 again or perform the procedure on page 8.

IMPORTANT

- ■ In certain reception conditions, station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, when you timer-record a TV programme using ShowView, the recorder will record a TV programme of a different station. When programming the timer using ShowView, be sure to check whether the channel position on which your recorder receives the broadcasting station you wish to record is selected (☞ pg. 26, "ShowView Timer Programming").
- ■ Your video recorder memorizes all detected stations even if reception of some of them is poor. In these cases picture quality may be poor. To delete those stations with an unacceptable picture ☞ "Delete A Channel" on page 47.

INFORMATION

Language for the on-screen display

Auto Set Up also selects the language automatically for the on-screen display depending on the Country setting you have made in step **2** on page 6 (unless you have selected BELGIUM or SUISSE), as shown below.

SUOMI	→	SUOMI	DANMARK	→	DANSK	NEDERLAND	→	NEDERLANDS
PORTUGAL	→	ENGLISH	ÖSTERREICH	→	DEUTSCH	GREECE	→	ENGLISH
DEUTSCHLAND	→	DEUTSCH	ČESKÁ REPUBLIKA	→	ENGLISH	OTHER WESTERN EUROPE	→	ENGLISH
POLSKA	→	ENGLISH	ITALIA	→	ITALIANO	OTHER EASTERN EUROPE	→	ENGLISH
NORGE	→	NORSK	MAGYARORSZÁG	→	ENGLISH			
SVERIGE	→	SVENSKA	ESPAÑA	→	CASTELLANO			

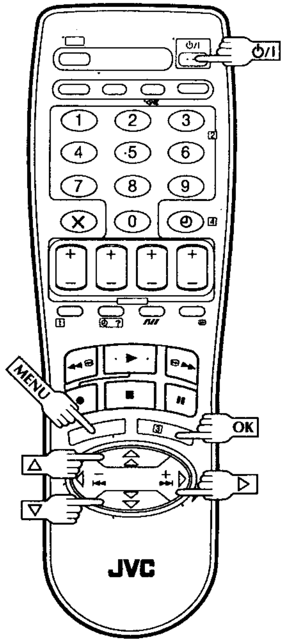
If you want to change the language setting manually, ☞ "Language" on page 10.

Just Clock

Your recorder is equipped with the Just Clock function which provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal. If you want to take advantage of this function, simply set it to "ON".
☞ "Just Clock" on page 52.

Language

Turn on the TV and select the VIDEO channel (or AV mode).



⏻/I
MENU
OK
△
▽
▷
JVC

This recorder offers you the choice to view on-screen messages in 10 different languages. Though Auto Set Up selects the language automatically (☞ pg. 9), you can change the language setting manually using this procedure as required.

1 TURN ON THE RECORDER

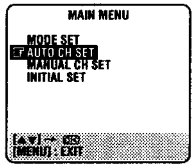
Press ⏻/I.

2 ACCESS MAIN MENU

Press **MENU**.

3 ACCESS COUNTRY SET SCREEN

Press △▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK** or ▷.



MAIN MENU
MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET
[▲▼] → OK
[MENU] : EXIT

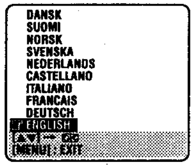
4 SELECT COUNTRY

Press △▽ to move the highlight bar (pointer) to your country's name, then press **OK** or ▷.

5 SELECT LANGUAGE

Press △▽ to move the highlight bar (pointer) to the language of your choice.

- You do not have to press **OK**; pressing **OK** enters Auto Set/T-V LINK screen.



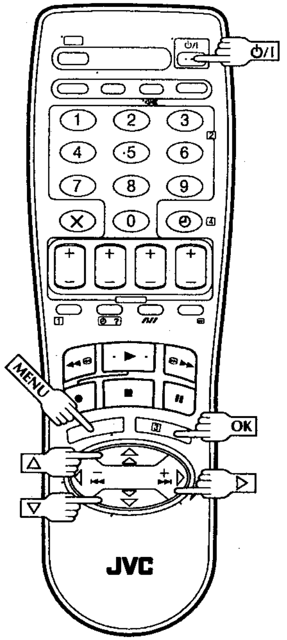
DANSK
SUOMI
NORSK
SVENSKA
NEDERLANDS
CASTELLANO
ITALIANO
FRANCAIS
DEUTSCH
ENGLISH
[▲▼] → OK
[MENU] : EXIT

6 RETURN TO NORMAL SCREEN

Press **MENU**.

On-Screen Displays

Turn on the TV and select the VIDEO channel (or AV mode).



⏻/I
MENU
OK
△
▽
▷
JVC

You can choose whether or not to have various operational indicators appear on screen, by setting this function ON or OFF. Messages appear in the selected language (☞ pg. 9 or 10).

1 TURN ON THE RECORDER

Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

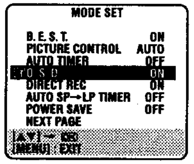
Press **MENU**.

3 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing △▽, then press **OK** or ▷.

4 ENABLE/DISABLE ON-SCREEN DISPLAY

The default setting is "ON", so if you want on-screen displays, leave the setting as it is and go to step **5**. If you don't want the displays to appear, press △▽ to move the highlight bar (pointer) to "O.S.D." and press **OK** or ▷ to set "O.S.D." to "OFF".


MODE SET

B. E. S. T. ON
PICTURE CONTROL AUTO
AUTO TIMER OFF
O. S. D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE OFF
NEXT PAGE

[▲▼] → OK
[MENU] : EXIT

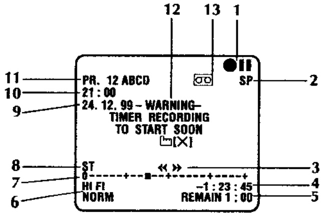
5 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *When you use this recorder as the player for editing, be sure to set "O.S.D." to "OFF" before starting.*
- *During playback, the operation mode indicators may be disturbed depending on the type of tape being used.*

The superimposed indication on the TV screen tells you what the recorder is doing.

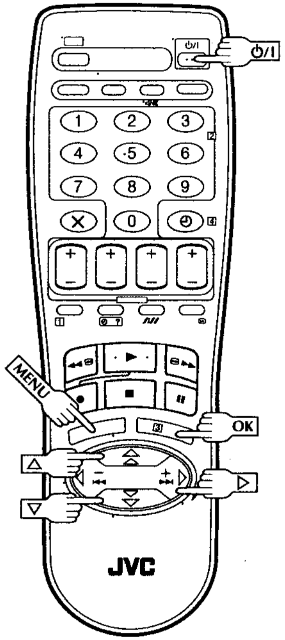


12
13
1
2
3
4
5
6
7
8
9
10
11
PR. 12 ABCD
SP
21 : 00
24. 12. 99 – WARNING–
TIMER RECORDING
TO START SOON
ST
« »
0
HI FI
NORM
–1 : 23 : 45
REMAIN 1 : 00

1– Operation mode indicators
2– Tape speed SP/LP/EP (EP is for NTSC playback only)
3– Tape direction
4– Counter display
5– Tape remaining time indicator (☞ pg. 21)
6– Audio mode display (☞ pg. 19)
7– Tape position indicator (☞ pg. 15)
8– Type of Broadcast (☞ pg. 23)
9– Current day/month/year
10– Clock display
11– Channel position number and station name/Aux. indicator (L-1, L-2 or S-1)
12– Timer warning display (☞ pg. 27, 29)
13– Cassette loaded mark

Power Save Mode

Turn on the TV and select the VIDEO channel (or AV mode).



You can reduce the power consumption while the recorder is turned off.

1 TURN ON THE RECORDER

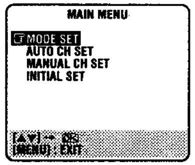
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU**.

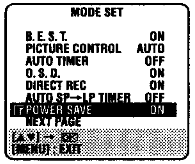
3 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.


MAIN MENU
MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET
[▲▼] → OK
[MENU] : EXIT

4 SELECT POWER SAVE MODE

Press △▽ to move the highlight bar (pointer) to "POWER SAVE", then press **OK** or ▷ to set to "ON".


MODE SET
B. E. S. T. ON
PICTURE CONTROL AUTO
AUTO TIMER OFF
O. S. D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE ON
NEXT PAGE
[▲▼] → OK
[MENU] : EXIT

5 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *During Power Save, the display panel will be turned off.*
- *The Just Clock function (☞ pg. 52) does not work while the Power Save mode is engaged.*
- *While the recorder is in the Power Save mode, the picture may be distorted momentarily when you turn on/off the recorder.*
- *Power Save does not work when ...*
  ... the recorder is in the Timer mode.
  ... the recorder's power is turned off after timer-recording (or Instant Timer Recording).
  ... the Auto Satellite Prog Recording mode is engaged (☞ pg. 33).
  ... "AV2 SELECT" is set to "DECODER" or "SAT" (☞ pg. 38).

T-V Link Functions

When you connect the recorder and your TV via fully-wired 21-pin SCART cable (☞ pg. 4), the following functions are available. You can use these functions only with the TV offering T-V Link, etc.*
For details, refer to the instruction manual for your TV.

* *Compatible with TVs offering T-V Link, EasyLink, Megalogic, SMARTLINK, Q-Link, DATA LOGIC or NEXTVIEWLINK via fully-wired 21-pin SCART cable. The degree of compatibility and available functions may differ by system.*

NexTView Link

You can download the EPG (Electronic Programme Guide) information from your TV for timer-programming on the recorder.
For details, refer to the instruction manual for your TV.

TV Auto Power On

You can turn on the TV and set it to video mode automatically whenever you play a tape.
For details, refer to the instruction manual for your TV.

VCR Auto Standby

You can use your TV's remote control to turn off the recorder.
For details, refer to the instruction manual for your TV.

Direct Rec

You can start recording the programme that you are watching on your TV with simple operation. Press and hold **RECORD** and press **PLAY** on the remote control, or press **RECORD** on the recorder.
Follow the procedure below to use this function.

1 TURN ON THE RECORDER

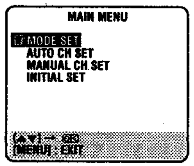
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU**.

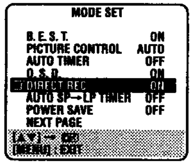
3 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.


MAIN MENU
MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET
[▲▼] → OK
[MENU] : EXIT

4 SELECT DIRECT REC MODE

Press △▽ to move the highlight bar (pointer) to "DIRECT REC", then press **OK** or ▷ to set to "ON".


MODE SET
B. E. S. T. ON
PICTURE CONTROL AUTO
AUTO TIMER OFF
O. S. D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE OFF
NEXT PAGE
[▲▼] → OK
[MENU] : EXIT

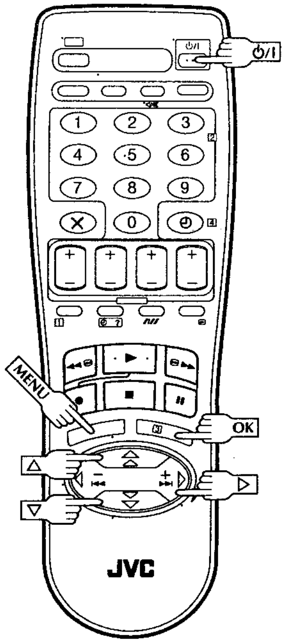
5 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *If "DIRECT REC" is set to "OFF", the **RECORD** button functions as described in "Basic Recording" (☞ pg. 20).*
- *During the Direct Rec, "– –" appears on the display panel.*
- *When you perform T-V LINK functions, be sure to use the fully-wired 21-pin SCART cable.*

Colour System Set



You can play back PAL, NTSC and MESECAM tapes, or record PAL and SECAM* signals on this recorder. Follow the procedure below to select the appropriate colour system.

* SECAM signals will be recorded as MESECAM on this recorder; MESECAM is the designation for tapes with SECAM signals that have been recorded on a MESECAM-compatible PAL video cassette recorder.

1

TURN ON THE RECORDER

Press ⏻/I.

2

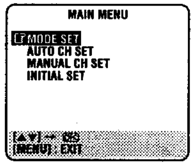
ACCESS MAIN MENU SCREEN

Press **MENU**.

3

ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.



MAIN MENU

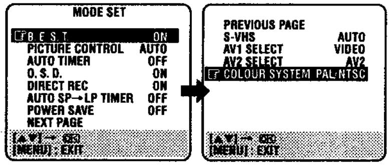
☞MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET

[▲▼] → OK
[MENU] : EXIT

4

SELECT COLOUR SYSTEM MODE

Press △▽ to move the highlight bar (pointer) to "COLOUR SYSTEM", then press **OK** or ▷ to select the appropriate colour system.



MODE SET

☞B. E. S. T. ON
PICTURE CONTROL AUTO
AUTO TIMER OFF
O. S. D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE OFF
NEXT PAGE

[▲▼] → OK
[MENU] : EXIT

PREVIOUS PAGE
S-VHS AUTO
AV1 SELECT VIDEO
AV2 SELECT AV2
☞ COLOUR SYSTEM PAL/NTSC

[▲▼] → OK
[MENU] : EXIT

a- PAL/NTSC: To record PAL signals, or play back a PAL or NTSC tape.
b- MESECAM: To record SECAM signals, or play back a MESECAM tape.

5

RETURN TO NORMAL SCREEN

Press **MENU**.

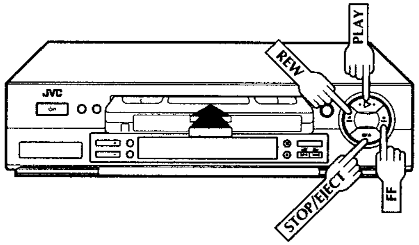
NOTES:

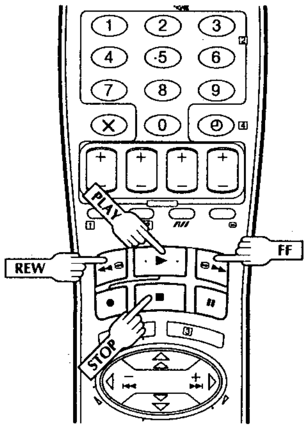
About NTSC Playback

- *Some TVs shrink the picture vertically and place black bars at the top and bottom of the screen. This is not a malfunction on the part of either the video recorder or the TV.*
- *The picture may roll up and down. This can be corrected using the V-HOLD control found on some TVs. (This cannot be corrected if the TV does not have a V-HOLD control.)*
- *The counter and tape remaining time readings will be incorrect.*
- *During search, still, or frame-by-frame playback, the picture will be distorted, and there may be a loss of colour.*
- *Depending on the type of TV, the top and bottom portions of superimposed displays may be cut off during NTSC playback.*

Basic Playback

Turn on the TV and select the VIDEO channel (or AV mode).





The easiest, most basic operation possible with your video recorder is tape playback. Already-recorded signals on a video tape are read by your video recorder and displayed on your TV just like a TV programme.

1

LOAD A CASSETTE

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointed toward the recorder. Don't apply too much pressure when inserting.

- The recorder power comes on automatically and the counter is reset to 0:00:00.
- If the record safety tab has been removed, playback begins automatically.

2

FIND PROGRAMME START POINT

If the tape is advanced past the start point, press **REW**. To go forward, press **FF**.

3

START PLAYBACK

Press **PLAY**. "BEST" appears blinking in the recorder's display panel during automatic tracking. (☞ pg. 24)

4

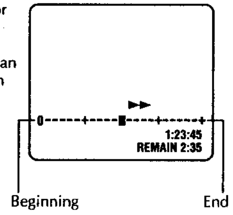
STOP PLAYBACK

Press **STOP** on the remote or **STOP/EJECT** on the recorder's front panel. Then press **STOP/EJECT** to remove the cassette.

Tape Position Indicator

The tape position indicator appears on screen when, from the Stop mode, you press **FF**, **REW** or perform an Index Search. The position of "■" in relation to "0" (beginning) or "+" (end) shows you where you are on the tape.

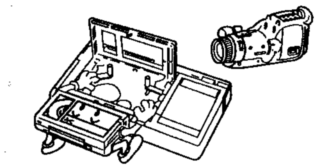
"O.S.D." (☞ pg. 11) must be set to "ON", or the indicator will not appear.



NOTE:

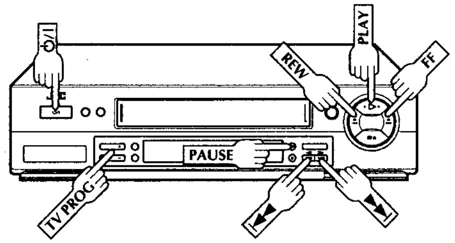
Depending on the type of tape used, there may be times when the indication is not correct.

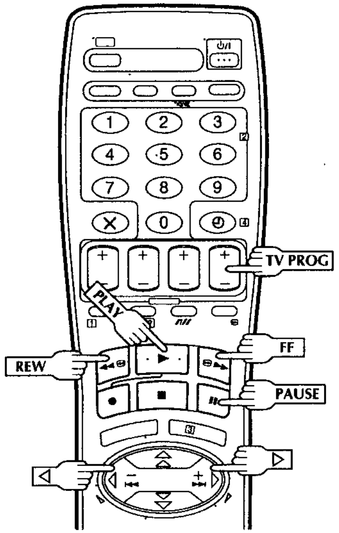
Usable cassettes



- Compact VHS camcorder recordings can be played on this video recorder. Simply place the recorded cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.
- This video recorder can record on regular VHS and Super VHS cassettes. While only VHS signals can be recorded on regular VHS cassettes, both VHS and Super VHS signals can be recorded and played back using Super VHS cassettes.

Playback Features





High-Speed Search

ACTIVATE HIGH-SPEED SEARCH

1 During playback or still picture, press **FF** for forward high-speed search, or **REW** for reverse high-speed search.

To resume normal playback, press **PLAY**.

NOTE:

*For short searches, press and hold **FF** or **REW** for over 2 seconds during playback or still picture. When released, normal playback resumes.*

Still Picture/Frame-By-Frame Playback

PAUSE DURING PLAYBACK

1 Press **PAUSE**. If there is vertical jitter, use the **TV PROG** buttons to correct the picture.

ACTIVATE FRAME-BY-FRAME PLAYBACK

2 Press **PAUSE**.

OR

Press ◁ or ▷ (|◀◀ or ▶▶|).

To resume normal playback, press **PLAY**.

Slow Motion

ACTIVATE SLOW-MOTION PLAYBACK

1 During still picture, press and hold **PAUSE** for 2 seconds, then release. Press and release again to return to still picture.

OR

During still picture, press and hold ◁ or ▷ (|◀◀ or ▶▶|). Release to return to still picture.

To resume normal playback, press **PLAY**.

Variable-Speed Search

ACTIVATE VARIABLE-SPEED SEARCH

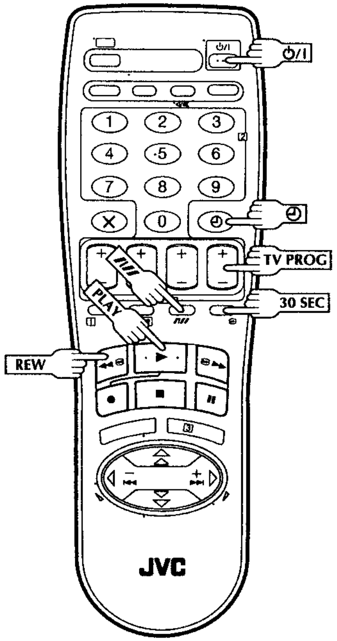
1 During playback, press ◁ or ▷ (|◀◀ or ▶▶|).

- The more times you press, the faster the playback picture moves.
- To decrease speed, press the button for the opposite direction.

To resume normal playback, press **PLAY**.

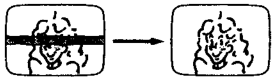
ATTENTION

In the search, still, slow-motion or frame-by-frame playback mode,
- the picture will be distorted.
- the noise bars will appear.
- there will be a loss of colour with an LP-recorded tape.



Manual Tracking

Your video recorder is equipped with automatic tracking control. During playback, you can override this and adjust the tracking manually by pressing the **TV PROG** buttons.



OVERRIDE AUTOMATIC TRACKING

1 Press **///** on the remote to engage manual tracking.

ADJUST TRACKING MANUALLY

2 Press **TV PROG** + or – to adjust tracking.

RETURN TO AUTOMATIC TRACKING

3 Press **///** on the remote to re-engage automatic tracking.

NOTE:

When a new tape is inserted, the recorder enters the automatic tracking mode automatically.

Skip Search

SKIP OVER UNWANTED SECTIONS

1 Press **30 SEC** 1 to 4 times during playback. Each press initiates a 30-second period of fast-motion playback. Normal playback resumes automatically.

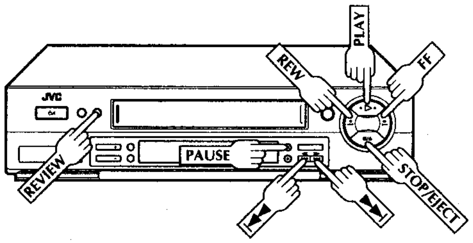
NOTE:

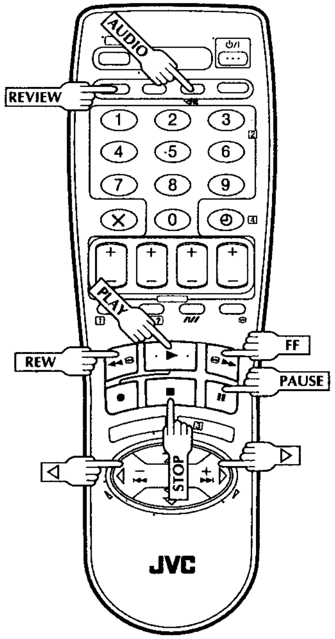
*To return to normal playback during a Skip Search, press **PLAY**.*

Next Function Memory

The Next Function Memory "tells" the recorder what to do after rewinding. Before continuing, make sure the recorder is in the Stop mode.

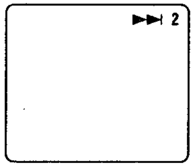
a– For Automatic Start Of Playback After Tape Rewind . . .
. . . press **REW**, then press **PLAY** within 2 seconds.
b– For Automatic Power Off After Tape Rewind . . .
. . . press **REW**, then press ⏻/I within 2 seconds.
c– For Automatic Timer Standby After Tape Rewind . . .
. . . press **REW**, then press ⊕ **(TIMER)** within 2 seconds.





Index Search

Your recorder automatically marks index codes at the beginning of each recording. This function gives you quick access to any one of 9 index codes in either direction.



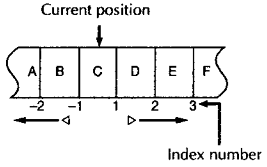
NOTE:

Before starting, make sure the recorder is in the Stop mode.

1 ACTIVATE INDEX SEARCH

Press ◁ or ▷ (|◀◀ or ▶▶|). "|◀◀ 1" or "▶▶| 1" is displayed on screen and search begins in the corresponding direction.

- To access index codes 2 through 9, press ◁ or ▷ repeatedly until the correct index number is displayed.
  Ex.: To locate the beginning of B from the current position, press ◁ twice.
  To locate the beginning of D from the current position, press ▷ once.



- When the specified index code is located, playback begins automatically.

Repeat Playback

Your video recorder can automatically play back the whole tape 50 times repeatedly.

1 START PLAYBACK

Press **PLAY**.

2 ACTIVATE REPEAT PLAYBACK

Press **PLAY** and hold for over 5 seconds, then release.

- The Play indicator (▷) on the display panel blinks slowly.
- The tape plays 50 times automatically, and then stops.

3 STOP PLAYBACK

Press **STOP** at any time to stop playback.

NOTE:

*Pressing **PLAY, REW, FF** or **PAUSE** also stops Repeat Playback.*

Soundtrack Selection

Your video recorder is capable of recording three soundtracks (HI-FI L, HI-FI R and NORM) and will play back the one you select.

During Playback

Pressing **AUDIO** on the remote control changes the soundtrack being played back as follows:

TRACK On-Screen Display	USE
HI FI L ▷ ◁ R	For Hi-Fi stereo tapes
HI FI L ▷	For main audio of Bilingual tapes
HI FI ◁ R	For sub audio of Bilingual tapes
NORM	For audio-dubbed tapes
HI FI NORM	For audio-dubbed tapes

NOTES:

- "HIFI L ▷ ◁ R" *should normally be selected. In this mode, Hi-Fi stereo tapes are played back in stereo, and the normal audio track is played back automatically for tapes with only normal audio.*
- *For instructions on recording stereo and bilingual programmes, refer to page 23.*
- *"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 11).*

Instant ReView

Simply by pressing a single button, the recorder power comes on, rewinds, and begins playback of the last timer-recorded programme. If you have several programmes recorded, you can easily access any of them.

NOTE:

Before starting, make sure that the recorder is off and that the Timer mode is disengaged.

1 ACTIVATE INSTANT REVIEW

Press **REVIEW**. The recorder power comes on and the recorder searches for the index code indicating the start of the last timer-recorded programme. Once it's found, playback begins automatically.

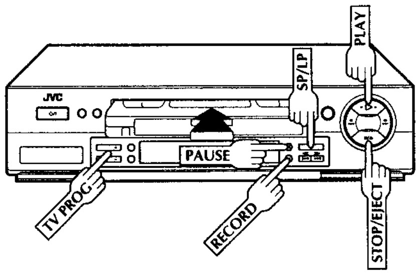
- The front display panel tells you how many programmes have been timer-recorded. If you have, for example, 3 programmes, "REVIEW" and "3" appear and blink. To watch the first of the 3 programmes, press **REVIEW** three times. The recorder searches and begins playback automatically. You can access a programme as far as 9 index codes away from the current tape position.

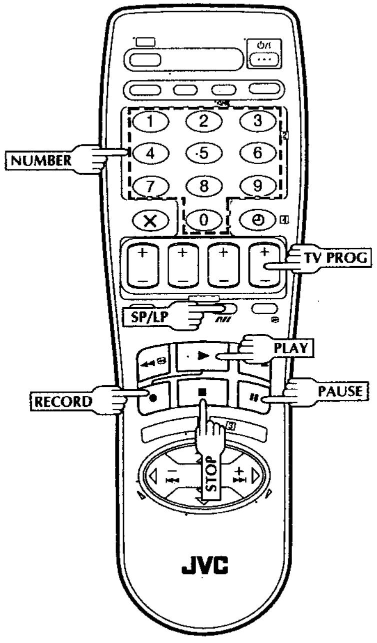
NOTES:

- *Instant ReView is not possible while the recorder is in the Timer mode.*
- *The number of recorded programmes will not be displayed on the front display panel after Auto Satellite Prog recording (☞ pg. 33).*

Basic Recording

Turn on the TV and select the VIDEO channel (or AV mode).





TV signals being received by the recorder's built-in tuner can be recorded onto a video tape. You can "capture" a TV programme using your video recorder.

1

LOAD A CASSETTE

Insert a cassette with the record safety tab intact.

- The counter is reset to 0:00:00 and the recorder power comes on automatically.

2

CHOOSE A PROGRAMME

Press **TV PROG** +/– or the **NUMBER** keys to select the channel you wish to record.

3

SET TAPE SPEED

Press **SP/LP (///)**. Check the SP/LP indicator on the recorder display panel to confirm the selected tape speed.

4

START RECORDING

Press and hold **RECORD** and press **PLAY** on the remote control, or press **RECORD** on the recorder.

B.E.S.T. takes place at the beginning of both the first SP and the first LP recording after inserting the cassette (☞ pg. 24).

If "DIRECT REC" is set to "ON", the programme that appears on the TV screen will be recorded (☞ pg. 13).

5

PAUSE/RESUME RECORDING

Press **PAUSE**. Press **PLAY** to resume recording.

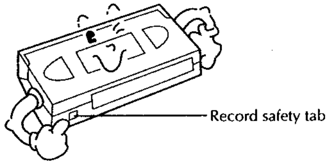
6

STOP RECORDING

Press **STOP** on the remote control or **STOP/EJECT** on the recorder. Then press **STOP/EJECT** to remove the cassette.

Accidental erasure prevention

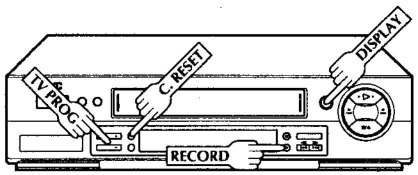
- To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.

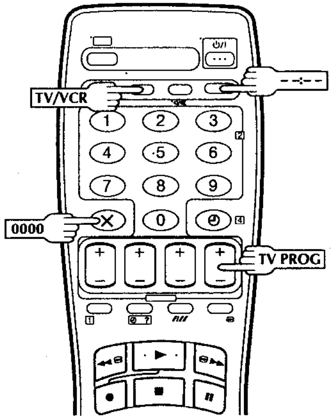


Recording Resume Function

If there is a power outage during recording (or Instant Timer Recording or timer recording), the recording will resume automatically when power is restored to the recorder unless the recorder's memory backup has expired.

Recording Features





Instant Timer Recording (ITR)

This easy method lets you record for from 30 minutes to 6 hours (selectable in 30-min. increments), and shuts the recorder off after recording is finished.

1

START RECORDING

Press **RECORD** on the recorder.

2

ENGAGE ITR MODE

Press **RECORD** again. "⊙" blinks and 0:30 appears on the front display panel.

3

SET RECORDING DURATION

If you want to record for more than 30 minutes, press **RECORD** to extend the time. Each press extends recording time by 30 minutes.

NOTE:

*You can only perform ITR using the **RECORD** button on the recorder's front panel.*

Record One Programme While Watching Another

If your recorder is connected to the TV via AV connection, . . .
. . . press **TV/VCR**. The recorder's VCR indicator and the TV broadcast being recorded disappear.

1

SELECT CHANNEL TO WATCH

Once recording is in progress, all you need to do is to set the channel controls on the TV for the station you wish to view.

- The programme selected with the TV's channel controls appears on the TV screen while the one selected with the recorder's **TV PROG** buttons is recorded on the tape.
- If a decoder is connected to the recorder (☞ pg. 42), you can select a scrambled channel as well with the TV channel controls.

Elapsed Recording Time Indication

You can check the exact time of a recording.

1

SET COUNTER DISPLAY

Press **DISPLAY** (or – –:– –) until a counter reading appears on the display panel.

2

RESET COUNTER

Press **C. RESET** (or **0000**) before starting recording or playback.

- The counter is reset to "0:00:00" and shows the exact elapsed time as the tape runs.

Tape Remaining Time

1

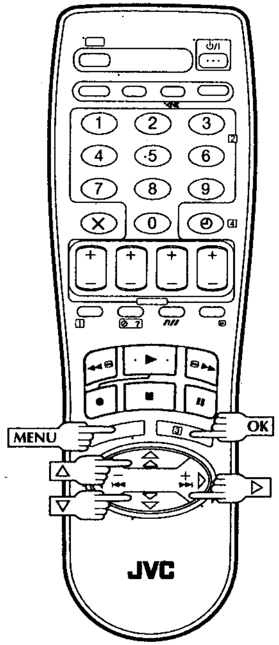
DISPLAY REMAINING TIME

Press **DISPLAY** (or – –:– –) until the time remaining on the tape appears.

- The display panel shows the tape remaining time with "◺" displayed.
- By pressing the **DISPLAY** (or – –:– –) button, you can change the display to show the counter reading, channel position*, clock time or tape remaining time.
  ** channel position is not displayed during playback.*

NOTE:

Depending on the type of tape used, there may be times when the tape remaining time reading may not appear right away, or is not correct. "– –:– –" may sometimes appear, or the display may blink on occasion.



S-VHS (Super VHS) and VHS

Your recorder can record in either S-VHS or VHS.

To record in S-VHS:
Perform the steps **1 – 4** below to set "S-VHS" to "AUTO".
Then, insert a cassette marked "S-VHS", the S-VHS indicator will light on the display panel.
The S-VHS recording mode will be selected.

To record in VHS:
Insert a cassette marked "VHS".
The VHS recording mode will be automatically selected regardless of the S-VHS mode setting.

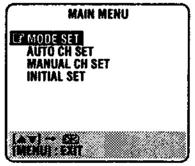
To record in VHS on an S-VHS cassette:
Insert the cassette marked "S-VHS", the S-VHS indicator will light on the display panel.
Then, perform the steps **1 – 4** below to set the "S-VHS" to "OFF"; the S-VHS indicator will go out.
The VHS recording mode will be selected.

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

2 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing △▽, then press **OK** or ▷.



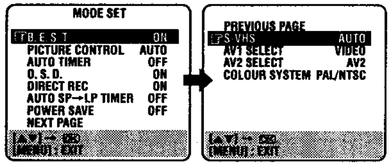
MAIN MENU

☞ MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET

[▲▼] → OK
[MENU] : EXIT

3 SELECT S-VHS MODE

Move the highlight (pointer) to "S-VHS" by pressing △▽, then press **OK** or ▷ to select "AUTO" or "OFF".



MODE SET

☞ B.E.S.T ON
PICTURE CONTROL AUTO
AUTO TIMER OFF
O. S. D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE OFF
NEXT PAGE

[▲▼] → OK
[MENU] : EXIT

PREVIOUS PAGE
☞ S-VHS AUTO
AV1 SELECT VIDEO
AV2 SELECT AV2
COLOUR SYSTEM PAL/NTSC

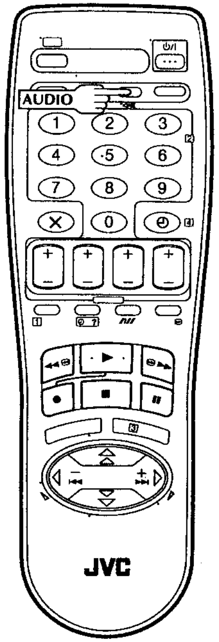
[▲▼] → OK
[MENU] : EXIT

4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTE:

When playing back a tape that has been recorded in S-VHS, the S-VHS indicator lights on the display panel regardless of the "S-VHS" mode setting.



Receiving Stereo And Bilingual Programmes

Your recorder is equipped with a Sound-Multiplex decoder (A2) and a Digital stereo sound decoder (NICAM) making reception of stereo and bilingual broadcasts possible.

When the channel is changed, the type of broadcast being received will be displayed on the TV screen for a few seconds.

Type of Broadcast Being Received	On-screen Display
A2 Stereo	ST
A2 Bilingual	BIL
Regular Monaural	(none)
NICAM Stereo	ST NICAM
NICAM Bilingual	BIL NICAM
NICAM Monaural	NICAM

- To listen to a stereo programme, press **AUDIO** until "HIFI L 🔈 🔈 R" appears on the screen.
- To listen to a bilingual programme, press **AUDIO** until "HIFI L 🔈" or "HIFI 🔈 R" appears on the screen (as required).
- To listen to the Standard (regular monaural) audio while receiving a NICAM broadcast, press **AUDIO** until "NORM" appears on the screen.

NOTE:

"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 11).

To Record Stereo And Bilingual Programmes (A2)

- Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound).
- Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.

To Record NICAM Stereo And Bilingual Programmes

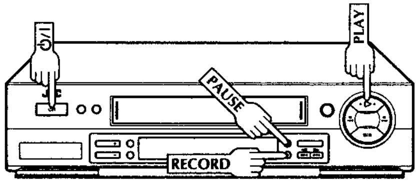
The NICAM audio programme will be recorded on the Hi-Fi audio track, and the Standard audio programme on the normal audio track.

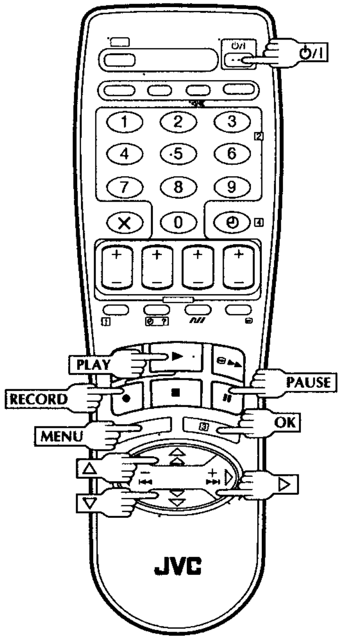
NOTES:

- *If the quality of stereo sound being received is poor, the broadcast will be received in monaural with better quality.*
- *Before playing back a programme recorded in stereo, or a bilingual programme, refer to "Soundtrack Selection" (☞ pg. 19).*

B.E.S.T. Picture System

Turn on the TV and select the VIDEO channel (or AV mode).





The B.E.S.T. (Biconditional Equalised Signal Tracking) system checks the condition of the tape in use during recording and playback, and compensates to provide the highest-possible recording and playback pictures. The default setting for both recording and playback is "ON".

Preparation

1 TURN ON THE RECORDER

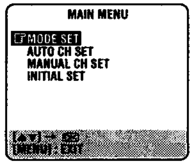
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.



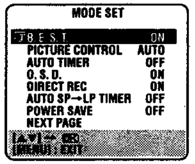
MAIN MENU

☞MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET

[▲▼] → [OK]
[MENU] : EXIT

4 SELECT B.E.S.T. MODE

Press △▽ to move the highlight bar (pointer) to "B.E.S.T.", then press **OK** or ▷ to set to "ON" or "OFF".



MODE SET

☞B.E.S.T.	ON
PICTURE CONTROL	AUTO
AUTO TIMER	OFF
O.S.D.	ON
DIRECT REC	ON
AUTO SP→LP TIMER	OFF
POWER SAVE	OFF
NEXT PAGE	

[▲▼] → [OK]
[MENU] : EXIT

5 RETURN TO NORMAL SCREEN

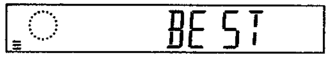
Press **MENU**.

Recording

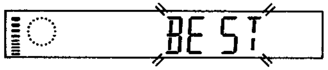
1 START RECORDING

Press and hold **RECORD** and press **PLAY** on the remote, or press **RECORD** on the recorder.

DURING B.E.S.T.



B.E.S.T. COMPLETE



- The recorder spends approximately 7 seconds assessing the condition of the tape, then begins recording.

NOTES:

- *The B.E.S.T. system works for both SP and LP modes only after a tape has been inserted and the Record mode is first initiated. It does not work during recording.*
- *The B.E.S.T. system does not work while Auto Satellite Prog recording is in progress (☞ pg. 33).*
- *In the case of timer recording, the B.E.S.T. system works before recording is initiated.*
- *Once the cassette is ejected, the B.E.S.T. data is cancelled. The next time the cassette is used for recording, B.E.S.T. is re-performed.*
- *Pressing the recorder's **RECORD** button while "BEST" is displayed does not start Instant Timer Recording (☞ pg. 21).*

ATTENTION

*Since the B.E.S.T. system works before recording actually starts, there is a delay of approximately 7 seconds after **RECORD** and **PLAY** on the remote are pressed, or **RECORD** on the recorder is pressed. To make sure you record the desired scene or programme in its entirety, first perform the following steps:*

*1) Press and hold **PAUSE** and press **RECORD** to engage the RECORD PAUSE mode.*
- *The recorder then automatically checks the condition of the tape and, after approximately 7 seconds, re-enters RECORD PAUSE.*

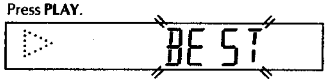
*2) Press **PLAY** to start recording.*
- *If you want to bypass the B.E.S.T. system and begin recording immediately, set "B.E.S.T." to "OFF" in step **4** on page 24.*

Playback

The recorder assesses the quality of the tape once you initiate playback.

1 START PLAYBACK

Press **PLAY**.



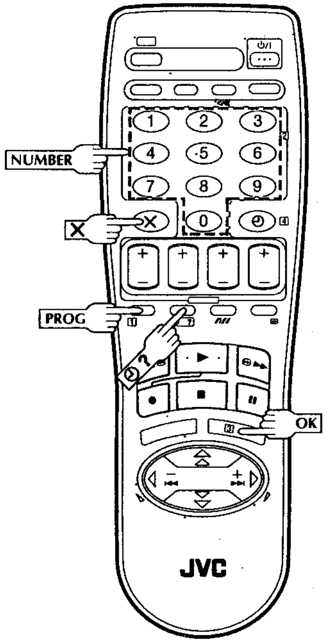
- The recorder adjusts the playback picture quality based on the quality of the tape in use.
- B.E.S.T. is active during Auto Tracking. "BEST" appears blinking on the recorder's display panel.

NOTES:

- *When watching a tape recorded with "B.E.S.T." set to "ON", it is recommended that you leave B.E.S.T. on during playback as well.*
- *When watching a rental tape or one recorded on another video recorder, or when using this recorder as the player for editing, set B.E.S.T. to your preference by performing steps **1** through **5** on page 24.*
- *"BEST" only appears at the beginning of automatic tracking. Even though it doesn't appear after that, the B.E.S.T. function is operative.*

SHOWVIEW Timer Programming

Before performing SHOWVIEW Timer Programming:
- Make sure that the recorder's built-in clock is set properly.
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).

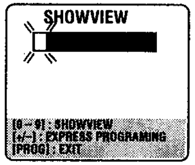


With SHOWVIEW, timer programming is greatly simplified because each TV programme has a corresponding code number which your recorder is able to recognize.

1

ACCESS SHOWVIEW SCREEN

Press **PROG**.


SHOWVIEW
[0 – 9] : SHOWVIEW
[+/–] : EXPRESS PROGRAMING
[PROG] : EXIT

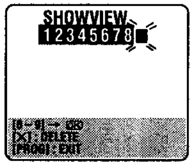
The front display panel looks like this:

2

ENTER SHOWVIEW NUMBER

Press the **NUMBER** keys to enter the SHOWVIEW number of a programme you wish to record.

- If you make a mistake, press X and input the correct number.


SHOWVIEW
12345678
[0 – 9] → OK
[X] : DELETE
[PROG] : EXIT

The SHOWVIEW number you enter appears on the front display panel:

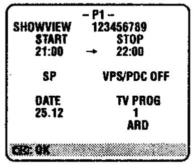
The display panel can show only a 4-digit number.

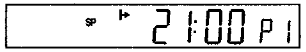
3

ACCESS SHOWVIEW PROGRAM SCREEN

Press **OK**, and the SHOWVIEW Program screen appears (if you're just starting out, "P1" appears).

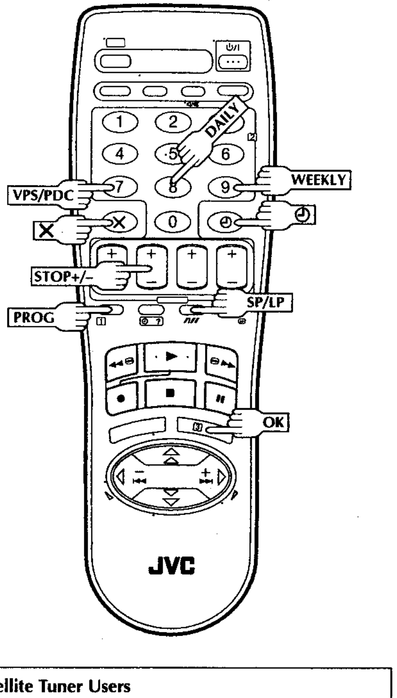
The display panel shows the programme start time. Pressing ⊕ ? changes the display to the programme stop time, then the date and channel position.


– P1 –
SHOWVIEW 123456789
START 21:00 → STOP 22:00
SP VPS/PDC OFF
DATE 25.12 TV PROG 1 ARD
OK: OK



IMPORTANT
Make sure the channel position number you wish to record is displayed; if not, see "SHOWVIEW Setup" on page 54 and set the Guide Program number for that SHOWVIEW number correctly.

- If the number you entered is invalid, "ERROR" appears on the screen and "Err" appears on the display panel. Press X and input a valid SHOWVIEW number.
- If the "GUIDE PROG SET" screen appears, see "ATTENTION – Regarding Guide Program Number Set" on page 27.



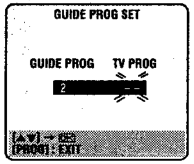
Satellite Tuner Users
To timer-record a satellite broadcast using SHOWVIEW:
1. Set "AV2 SELECT" to "AV2" (☞ pg. 38).
2. Perform steps **1** – **7**.
3. Set the satellite tuner to the appropriate channel before the selected programme begins.
4. Leave the satellite tuner's power on.

ATTENTION

Regarding Guide Program Number Set

"GUIDE PROG SET" appears after performing step **3** if the Guide Program number for the SHOWVIEW number you entered has not been set.

- Press the **NUMBER** keys or ∆∇ to input the channel position number on which your recorder receives that station, then press **OK** or ▷ to set the Guide Program number. The SHOWVIEW program screen appears.


GUIDE PROG SET
GUIDE PROG TV PROG
2 – –
[▲▼] → OK
[PROG] : EXIT

(Ex.) To timer-record a ZDF programme with SHOWVIEW.
* If your recorder receives ZDF on the channel position 2, press **OK** or ▷ after entering "2".

4

SET TAPE SPEED

Press **SP/LP (▮/▮▮)** to set the tape speed.

5

SET VPS/PDC MODE

Press **VPS/PDC** to select "ON" or "OFF".
If "VPS/PDC ON" is displayed on the screen or "VPS/PDC" is lit on the display panel, VPS/PDC is set to ON. If "VPS/PDC OFF" is displayed on the screen or "VPS/PDC" is not lit on the display panel, VPS/PDC is set to OFF.
☞ "VPS/PDC Recording" on page 29.

6

RETURN TO NORMAL SCREEN

Press **PROG** or **OK**. "PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.

- Repeat steps **1** – **6** for each additional programme.

7

ENGAGE RECORDER'S TIMER MODE

Press ⊕ (**TIMER**). The recorder turns off automatically and ⊕ appears on the display panel.

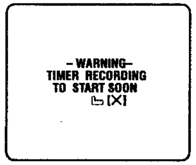
- To disengage the timer, press ⊕ (**TIMER**) again.

NOTES:

- *To Change The Stop Time . . .*
  *. . . press **STOP +/–** after pressing **OK** in step **3**. You can compensate for anticipated programme schedule delays this way.*
- *To Timer-Record Weekly Or Daily Serials . . .*
  *. . . after pressing **OK** in step **3**, press **WEEKLY** (**NUMBER** key "9") for weekly serials or **DAILY** (**NUMBER** key "8") for daily serials (Monday – Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.*
- *You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 30).*
- *It is not possible to timer-record a TV programme with a SHOWVIEW number which starts with "0".*

Timer Warning

If you have programmed your recorder to timer-record a programme or a series of programmes, a warning appears on screen to tell you that the recording is to start in 5 minutes.


– WARNING–
TIMER RECORDING
TO START SOON
↳ [X]

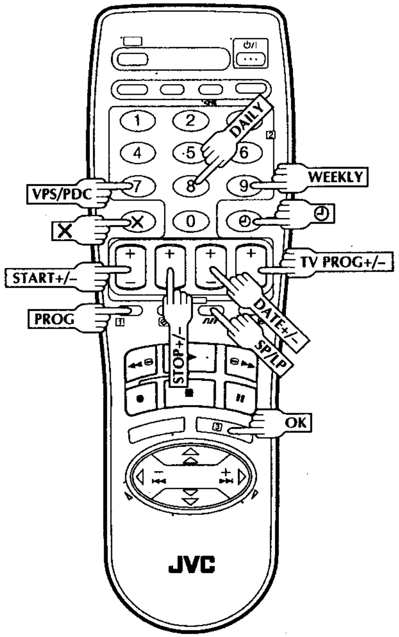
NOTES:

- *The warning only appears if you're not in the Timer mode at that time.*
- *If this recorder is being used as the player for tape dubbing, the warning screen is recorded on the tape in the other video recorder.*

The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press X.

Express Timer Programming

Before performing Express Timer Programming:
- Make sure that the recorder's built-in clock is set properly.
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).



If you don't know the ShowView number for the programme you wish to record, use the following procedure to set your recorder to timer-record the programme.

1

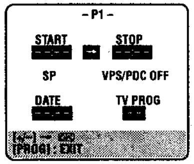
ACCESS SHOWVIEW SCREEN

Press **PROG**.

2

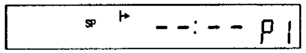
ACCESS PROGRAMME SCREEN

Press **START +/–**. (If you're just starting out, "P1" appears.)



- P1 -
START --:-- → STOP --:--
SP VPS/PDC OFF
DATE --.-- TV PROG --
[+/–] → ⊕
[PROG] : EXIT

The front display panel looks like this:



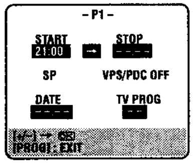
SP ▸ --:-- P1

3

ENTER PROGRAMME START TIME

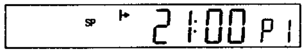
Press **START +/–** to enter the time you want recording to start.

- Press and hold **START +/–** to move in 30-minute increments, or press and release repeatedly to move 1 minute at a time.



- P1 -
START 21:00 → STOP --:--
SP VPS/PDC OFF
DATE --.-- TV PROG --
[+/–] → ⊕
[PROG] : EXIT

The front display panel looks like this:



SP ▸ 21:00 P1

4

ENTER PROGRAMME STOP TIME

Press **STOP +/–** to enter the time you want recording to stop.

- Press and hold **STOP +/–** to move in 30-minute increments, or press and release repeatedly to move 1 minute at a time.

5

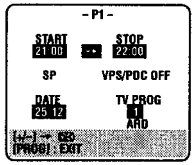
ENTER PROGRAMME DATE

Press **DATE +/–**. (The current date appears on screen. The date you enter appears in its place.)

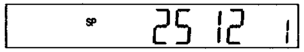
6

ENTER CHANNEL POSITION

Press **TV PROG +/–**.



- P1 -
START 21:00 → STOP 22:00
SP VPS/PDC OFF
DATE 25.12 TV PROG 1
ARD
[+/–] → ⊕
[PROG] : EXIT



SP 25 12 1

7

SET TAPE SPEED

Press **SP/LP (///)** to set the tape speed.

8

SET VPS/PDC MODE

Press **VPS/PDC** to select "ON" or "OFF".
If "VPS/PDC ON" is displayed on the screen or "VPS/PDC" is lit on the display panel, VPS/PDC is set to ON.
If "VPS/PDC OFF" is displayed on the screen or "VPS/PDC" is not lit on the display panel, VPS/PDC is set to OFF.
☞ "VPS/PDC Recording" in the right column.

9

RETURN TO NORMAL SCREEN

After confirming all information is correct, press **PROG** or **OK**. "PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.

- Repeat steps **1** – **9** for each additional programme.

10

ENGAGE RECORDER'S TIMER MODE

Press ◷ (**TIMER**). The recorder turns off automatically and ◷ appears on the display panel.

- To disengage the timer, press ◷ (**TIMER**) again.

To Timer-Record Weekly Or Daily Serials . . .
. . . anytime during steps **2** through **9**, press **WEEKLY** (**NUMBER** key "9") for weekly serials or **DAILY** (**NUMBER** key "8") for daily serials (Monday – Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.

NOTE:

You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 30).

Satellite Tuner Users

To timer-record a satellite broadcast using Express Timer Programming:
1. Set "AV2 SELECT" to "AV2" (☞ pg. 38).
2. Perform steps **1** – **10**. Enter "L-2" for the channel position in step **6**.
3. Set the satellite tuner to the appropriate channel before the selected programme begins.
4. Leave the satellite tuner's power on.

VPS/PDC Recording

Now available from some TV stations, PDC (Programme Delivery Control) and VPS (Video Programme System) are service designed to assure safe, accurate timer recording. With this system, special code signals are transmitted together with the audio/video signals. These code signals control your video recorder and have precedence over the advertised times you may have preset into the timer. This means that your recorder will start and stop recording when the preset TV programmes actually start and end — even if the broadcast time of a preset TV programme is changed.

NOTES:

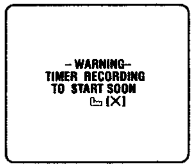
- *When you use Express Timer Programming, set the start time (VPS or PDC time) exactly as advertised in the TV listing. A different time than advertised will result in no recording.*
- *VPS/PDC recording is also possible when a satellite tuner or a cable system is connected to AV2 IN/DECODER on your recorder.*
- *VPS/PDC recording is also possible via the AV1 IN/OUT connector.*

How to check if the station being received transmits a VPS/PDC signal

1. Press – –:– – until the channel position appears on the display panel.
2. Hold down **START+** for about 5 seconds.
   - "VPS/PDC" appears blinking on the display panel.
   If a VPS/PDC signal is detected from the station, "VPS/PDC" will stop blinking.
   If no VPS/PDC signal is detected from the station, "VPS/PDC" will blink at a slower rate.
3. Press – –:– – or **START+** again to return to normal display.

Timer Warning

If you have programmed your recorder to timer-record a programme or a series of programmes, a warning appears on screen to tell you that the recording is to start in 5 minutes.

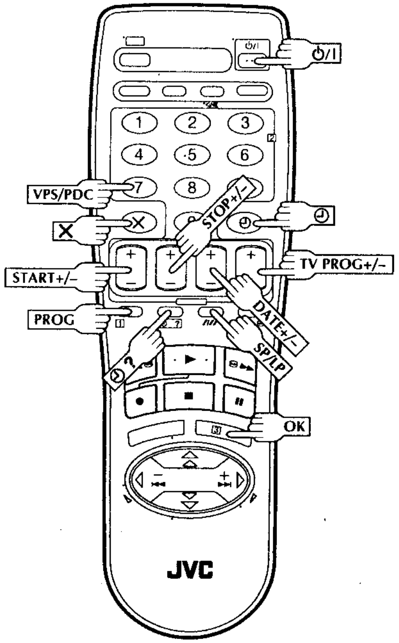


– WARNING –
TIMER RECORDING
TO START SOON
⊳ [X]

NOTES:

- *The warning only appears if you're not in the Timer mode at that time.*
- *If this recorder is being used as the player for tape dubbing, the warning screen is recorded on the tape in the other video recorder.*

The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press X.



Check, Cancel And Replace Programmes

1

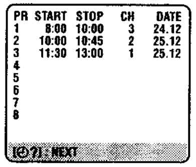
DISENGAGE TIMER MODE

Press ◷ (**TIMER**), then press ⏻/I.

2

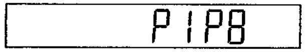
ACCESS PROGRAM CHECK SCREEN/DISPLAY

Press ◷ **?**.



PR	START	STOP	CH	DATE
1	8:00	10:00	3	24.12
2	10:00	10:45	2	25.12
3	11:30	13:00	1	25.12
4				
5				
6				
7				
8				

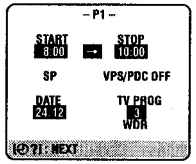
[◷?] : NEXT



3

ACCESS PROGRAM SCREEN/DISPLAY

Press ◷ **?** again to check more information. Each time you press ◷ **?**, the next programme's information appears.



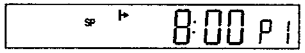
– P1 –

START 8:00 → STOP 10:00

SP VPS/PDC OFF

DATE 24.12 TV PROG 3 WDR

[◷?] : NEXT



- The display panel shows the programme start time. Pressing **OK** changes the display to the programme stop time, then the date and the channel position.

To cancel or replace a programme...

4

CANCEL OR REPLACE A PROGRAMME

Press X to cancel a programme. To replace a programme, press the appropriate button: **START+/–**, **STOP+/–**, **DATE+/–**, **TV PROG+/–**, **VPS/PDC**, **SP/LP** (**/////**).

5

RETURN TO NORMAL SCREEN/DISPLAY

Press ◷ **?** as many times as necessary. If there are still some programmes remaining, go on to step **6**.

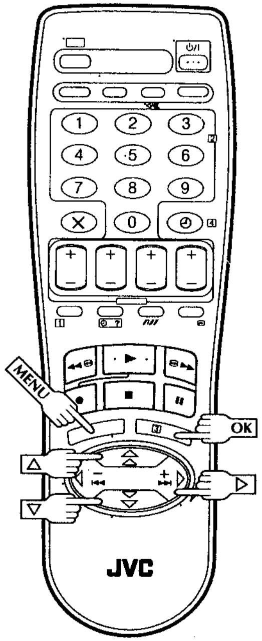
6

RETURN TO TIMER MODE

Press ◷ (**TIMER**).

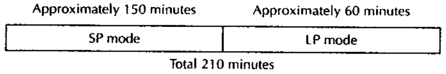
NOTE:

You can also check the programmes on the display panel even if the recorder's power is off (unless the recorder is in the Power Save mode ☞ pg. 12) or the recorder is in the Timer mode; however, it is not possible to cancel or replace the programmes.



Auto SP→LP Timer

If, when timer-recording in SP mode, there is not enough tape to record the entire programme, the recorder automatically switches to LP mode to allow complete recording.
For Example . . .
Recording a programme of 210 minutes in length onto a 180-minute tape



Make sure you set "AUTO SP→LP TIMER" to "ON" at the Mode Set screen before the timer-recording starts.

1

ACCESS MAIN MENU SCREEN

Press **MENU**.

2

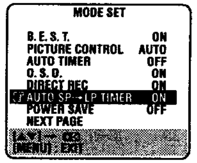
ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.

3

SELECT MODE

Press △▽ to move the highlight bar (pointer) to "AUTO SP→LP TIMER", then press **OK** or ▷ to select "ON".



MODE SET

B. E. S. T.	ON
PICTURE CONTROL	AUTO
AUTO TIMER	OFF
O. S. D.	ON
DIRECT REC	ON
AUTO SP→LP TIMER	ON
POWER SAVE	OFF
NEXT PAGE	

[▲▼] → OK
[MENU] : EXIT

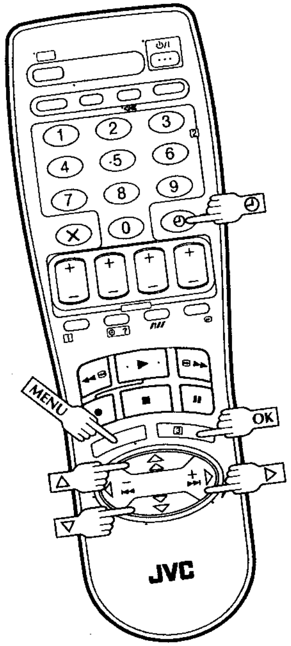
4

RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *If you have programmed the recorder to timer-record 2 or more programmes, the second programme and those thereafter may not fit on the tape if you set "AUTO SP→LP TIMER" to "ON". In this case, make sure the mode is not engaged, then set the tape speed manually during timer programming.*
- *In order to ensure that the recording fits on the tape, this feature may leave a slight non-recorded section at the end of the tape.*
- *There may be some noise and sound disturbance at the point on the tape where the recorder switches from SP to LP mode.*
- *The Auto SP→LP Timer feature is not available during ITR (Instant Timer Recording), and the feature will not work properly with any tapes longer than E-180 or with some tapes of shorter lengths.*
- *If you perform timer recording with both VPS/PDC and the Auto SP→LP Timer activated, and the programme goes beyond its originally scheduled length, there may be times when the programme cannot be recorded in its entirety.*



Auto Timer

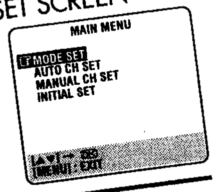
When the Auto Timer is set to ON the timer is automatically engaged when the recorder power is turned off and automatically disengaged when the recorder is powered back on.

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

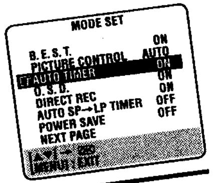
2 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.


MAIN MENU
☞MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET
[▲▼] → OK
[MENU] : EXIT

3 SELECT MODE

Press △▽ to move the highlight bar (pointer) to "AUTO TIMER", then press **OK** or ▷ to select either "ON" or "OFF".


MODE SET
B.E.S.T. ON
PICTURE CONTROL AUTO
☞AUTO TIMER ON
O.S.D. ON
DIRECT REC ON
AUTO SP→LP TIMER OFF
POWER SAVE OFF
NEXT PAGE
[▲▼] → OK
[MENU] : EXIT

4 RETURN TO NORMAL SCREEN

Press **MENU**.

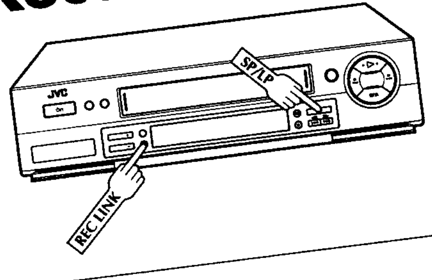
NOTE:

*For safety, when Auto timer is set to "OFF", all other recorder functions are disabled while the Timer mode is engaged. To disengage the timer, press ⊕ (**TIMER**).*

Automatic Satellite Programme Recording

This facility allows you record automatically a satellite programme which is timer-programmed on your external satellite tuner. Connect a satellite tuner to the recorder's AV2 IN/DECODER connector (☞ pg. 39, 40) and programme the timer on the satellite tuner; the recorder starts recording when the signals input from the satellite tuner to the AV2 IN/DECODER connector, and when there is no input signals the recorder stops recording and the power shuts off.

Before performing the following steps:
- Make sure the satellite tuner is connected to the recorder's AV2 IN/DECODER connector. (☞ pg. 39, 40)
- Programme the timer on the satellite tuner.
- Insert a cassette with the safety tab in place.



1 SELECT AV2 SELECT MODE

Set "AV2 SELECT" to "AV2" (☞ pg. 38).

- When you select "SAT", refer to "IMPORTANT" on page 39.

2 SET TAPE SPEED

Press **SP/LP** (**///**) to set the tape speed.

3 ENGAGE AUTO SATELLITE PROG REC MODE

Press and hold **REC LINK** on the recorder for about 2 seconds. The button lights up and the recorder turns off automatically.

- To disengage the Auto Satellite Prog Rec mode, press **REC LINK**. The button's light goes off.
- If the recorder's power is off, it is not possible to engage the Auto Satellite Prog Rec mode.

ATTENTION

- Be sure not to turn on the satellite tuner before the programme is executed; otherwise, the recorder will start recording when the satellite tuner's power is turned on.
- If you have connected another appliance other than a satellite tuner to the AV2 IN/DECODER connector, be sure not to engage the Auto Satellite Prog Rec mode; otherwise, the recorder will start recording when the connected appliance's power is turned on.
- Auto Satellite Prog recording and timer-recording cannot be done at the same time.

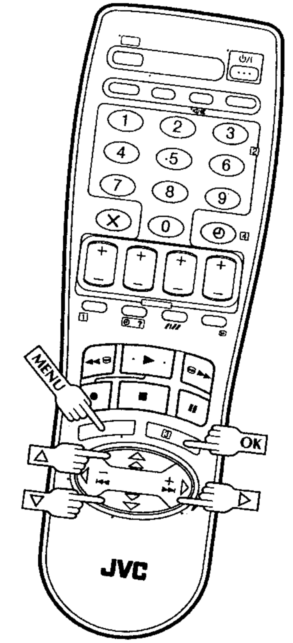
NOTES:

- *Auto Satellite Prog recording is possible with the AV2 IN/DECODER connector only. (☞ pg. 39, 40)*
- *For timer programming of the satellite tuner, refer to the instruction manual of the satellite tuner.*
- *Auto Satellite Prog recording is not possible if your satellite tuner does not have a timer.*
- *The button's light blinks while Auto Satellite Prog recording is in progress.*
- *Pressing the recorder's ⏻/I button while Auto Satellite Prog recording is in progress turns off the recorder's power and disengage the Auto Satellite Prog Rec mode.*
- *If there are more than one satellite programme you wish to record with Auto Satellite Prog Recording, it is not possible to set the different tape speed per each; the tape speed selected in step **2** will be applicable to all the programmes for Auto Satellite Prog recording.*
- *The B.E.S.T. system (☞ pg. 24) does not work while Auto Satellite Prog recording is in progress.*
- *Just Clock (☞ pg. 52) does not work when the Auto Satellite Prog Rec mode is engaged.*
- *Depending on the type of satellite tuner, the recorder may not record a slight portion of the beginning of the programme or may record slightly longer than the actual length of the programme.*
- *If you engage the Auto Satellite Prog Recording mode when the satellite tuner's power is on, the recorder will not start Auto Satellite Prog recording even though the button's light blinks. When the satellite tuner shuts off once and is turned back on again, the recorder starts recording.*
- *When the Auto Satellite Prog Rec mode is engaged or the recorder's power is turned off after Auto Satellite Prog recording is finished, the recorder will not enter the Timer mode even though "AUTO TIMER" is set to "ON".*
- *After Auto Satellite Programme recording, the number of recorded programmes will not be displayed on the front display panel for the Instant ReView function (☞ pg. 19).*
- *You can also record a programme from your cable system in the same way if the system has a timer.*
- *When you press and hold the recorder's **REC LINK** button to engage the Auto Satellite Prog Rec mode, if the REC LINK button does not light but instead blinks quickly even though your satellite tuner's power is off, Auto Satellite Prog Recording will not work properly with that satellite tuner*. If this is the case, perform "Express Timer Programming" (☞ pg. 28) to timer-record a satellite programme.*

** Some satellite tuners output signals even if the power is off. Auto Satellite Prog Recording is not possible with those satellite tuners.*

Preparation For Editing

Turn on the TV and select the VIDEO channel (or AV mode).



Advantages Of S-VHS Video Recorders

You can edit from VHS to S-VHS, S-VHS to VHS, or, from S-VHS to S-VHS.

- From VHS to S-VHS: Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS: Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS: All signals will be transferred with minimum degradation.

Picture Control

This feature helps you to adjust the playback picture quality according to your preference. *The default setting is "AUTO."

1 ACCESS MAIN MENU SCREEN

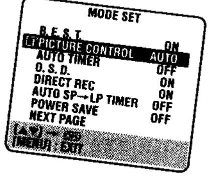
Press **MENU**.

2 ACCESS MODE SET SCREEN

Move the highlighted bar (pointer) to "MODE SET" by pressing △▽, then press **OK** or ▷.

3 SELECT PICTURE CONTROL SET MODE

Move the highlighted bar (pointer) to "PICTURE CONTROL" by pressing △▽, then press **OK** or ▷ to select the desired mode.


```
MODE SET
B.E.S.T.                  ON
PICTURE CONTROL         AUTO
AUTO TIMER               OFF
O.S.D.                    ON
DIRECT REC                ON
AUTO SP→LP TIMER         OFF
POWER SAVE               OFF
NEXT PAGE
[▲▼] → [ ]
[MENU] : EXIT
```

AUTO: Provides optimised picture benefits of B.E.S.T. Picture System. Normally select AUTO.

EDIT: Minimizes picture degradation during editing (recording and playback).

SOFT: Reduces image coarseness when viewing overplayed tapes containing a lot of noise.

SHARP: Clearer, sharper-edged picture when viewing images with lots of flat, same-coloured surfaces such as cartoons.

NOTES:

- *When you select EDIT, SOFT or SHARP, the selected mode will not change until you select again.*
- *When you select EDIT to dub tapes, be sure to select AUTO after you finish dubbing the tapes.*

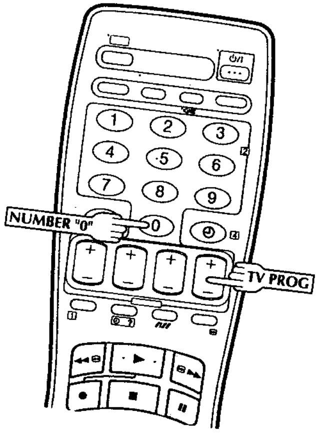
4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *When B.E.S.T. is OFF, "PICTURE CONTROL" switches automatically from AUTO to NORM.*
- *Select EDIT when you are dubbing tapes. Refer to page 36.*

Edit From A Camcorder



You can use a camcorder as the source player and your video recorder as the recorder.

1 MAKE CONNECTIONS

A *If the camcorder has no S-VIDEO output connector...*
... connect the camcorder's AUDIO/VIDEO OUT connectors to the recorder's AV2 IN/DECODER or AV1 IN/OUT connector via the cable adapter.

B *If the camcorder has an S-VIDEO output connector...*
... connect the camcorder's S-VIDEO OUT and AUDIO OUT connectors to the recorder's S-VIDEO and AUDIO input connectors.

- When using a monaural camcorder, connect its AUDIO OUT connector to the AUDIO L input connector on your recorder.

2 SET RECORDER'S INPUT MODE

Press **NUMBER** key "0" and/or **TV PROG** to select "L-1" for the AV1 IN/OUT connector, "L-2" for the AV2 IN/DECODER connector, or "S-1" for the AUDIO/S-VIDEO input connectors, depending on the connectors being used.

3 SET EDIT MODE

See "Picture Control" on page 34.

4 START CAMCORDER

Engage its Play mode.

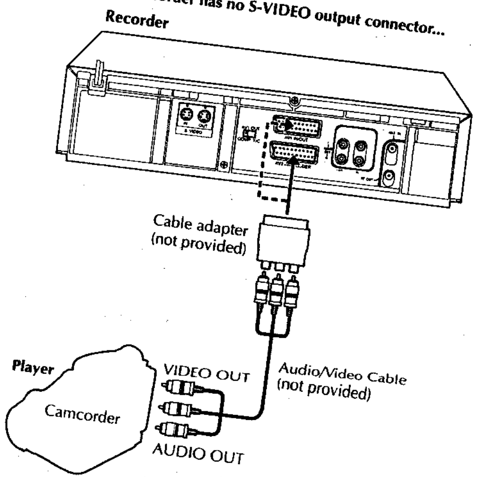
5 START RECORDER

Engage its Record mode.

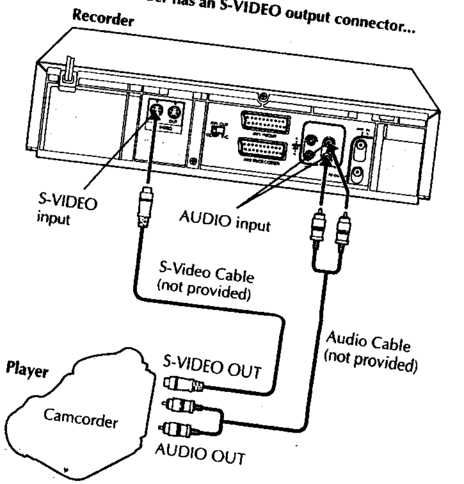
NOTES:

- *All necessary cables can be obtained from your dealer.*
- *You can also use another video recorder as the player instead of a camcorder.*
- *When you select EDIT to dub tapes in step 3, be sure to select AUTO (or NORM when B.E.S.T. is set to OFF) after you finish dubbing the tapes.*

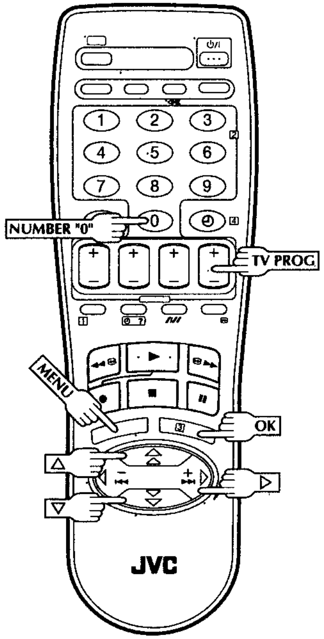
A If the camcorder has no S-VIDEO output connector...


Recorder
Cable adapter (not provided)
Player
Camcorder
VIDEO OUT
AUDIO OUT
Audio/Video Cable (not provided)

B If the camcorder has an S-VIDEO output connector...



Edit To Or From Another Video Recorder


NUMBER "0"
TV PROG
MENU
OK
△
▽
▷
JVC

You can use your video recorder as the source player or as the recording deck.

1 MAKE CONNECTIONS

Connect the player's 21-pin SCART connector to the recorder's 21-pin SCART connector as illustrated on page 37.

[A] *When Using Your Video Recorder As The Source Player ...*
... connect its AV1 IN/OUT connector to the recording deck.

[B] *When Using Your Video Recorder As The Recording Deck ...*
... connect its AV2 IN/DECODER or AV1 IN/OUT connector to the source player.

[C] *If Another Recorder Is Compatible With The Y/C Signal ...*
... connect your recorder's AV1 IN/OUT connector to another recorder.

With [C] connection ...
- When using your recorder as the recording deck, set "AV1 SELECT" to "S-VIDEO" and "AV2 SELECT" to "AV2" (☞ pg. 38).
- When using your recorder as the source player, set the AV1 OUT switch on the rear panel to Y/C (☞ pg. 4).

2 SET RECORDING DECK'S INPUT MODE

Set to AUX. With this video recorder, press **NUMBER** key "0" and/or **TV PROG** to select "L-1" for the AV1 IN/OUT connector, or "L-2" for the AV2 IN/DECODER connector, depending on the connector being used.

- When using the AV2 IN/DECODER connector, make sure "AV2 SELECT" is set to "AV2" (☞ pg. 38).

3 SET EDIT MODE

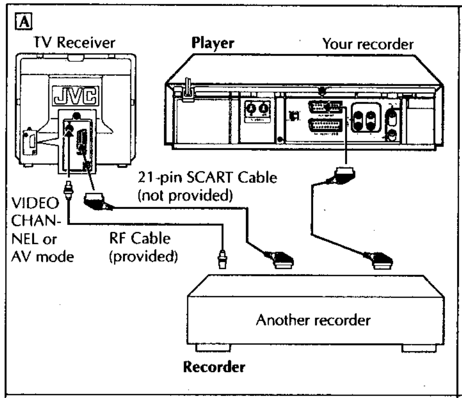
See "Picture Control" on page 34.

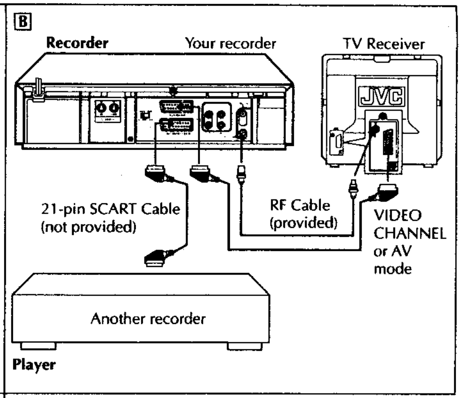
4 START SOURCE PLAYER

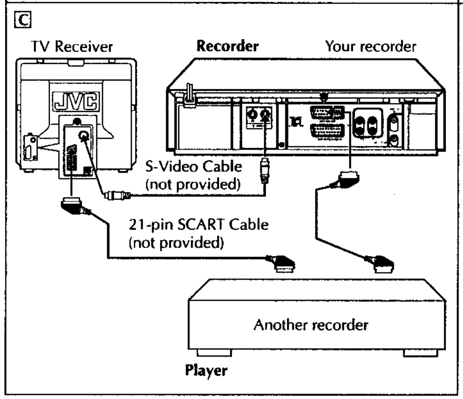
Engage its Play mode.

5 START RECORDING DECK

Engage its Record mode.


A
TV Receiver
Player
Your recorder
21-pin SCART Cable (not provided)
VIDEO CHANNEL or AV mode
RF Cable (provided)
Another recorder
Recorder


B
Recorder
Your recorder
TV Receiver
21-pin SCART Cable (not provided)
RF Cable (provided)
VIDEO CHANNEL or AV mode
Another recorder
Player


C
TV Receiver
Recorder
Your recorder
S-Video Cable (not provided)
21-pin SCART Cable (not provided)
Another recorder
Player

NOTES:

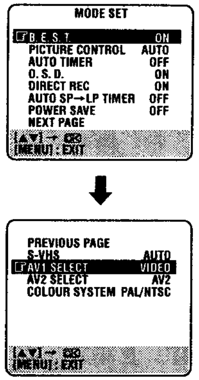
- *All necessary cables can be obtained from your dealer.*
- *For Y/C signal input/output, be sure to use a 21-pin SCART cable that is compatible with the Y/C signal.*
- *When you select EDIT to dub tapes in step **3**, be sure to select AUTO (or NORM when B.E.S.T. is set to OFF) after you finish dubbing the tapes.*
- *When you use this recorder as the player for editing, be sure to set "O.S.D." to "OFF" before starting (☞ pg. 11).*
- *If you are using another recorder with S-Video and Audio input/output connectors, you can connect those connectors to this recorder's S-VIDEO and AUDIO input/output connectors.*
  When Using Your Video Recorder As The Source Player ...
  ... connect its rear panel S-VIDEO and AUDIO output connectors to the recording deck's S-Video and Audio input connectors.
  When Using Your Video Recorder As The Recording Deck ...
  ... connect its rear panel S-VIDEO and AUDIO input connectors to the source player's S-Video and Audio output connectors.
  Then, set the recorder's input mode to "S-1".

AV1 SELECT Setting

Set "AV1 SELECT" to the appropriate mode depending on the type of unit connected to the rear panel AV1 IN/OUT connector of this recorder.

1. Press **MENU** to access the Main Menu screen.
2. Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.
3. Press △▽ to move the highlight bar (pointer) to "AV1 SELECT".
4. Press **OK** or ▷ to select "VIDEO" or "S-VIDEO".
   - a–VIDEO : If a connected device's output is compatible only with regular video signals, set "AV1 SELECT" to "VIDEO".
   - b–S-VIDEO : If a connected device's output is compatible with Y/C signals, set "AV1 SELECT" to "S-VIDEO". This setting will let you take advantage of higher-quality S-VHS pictures.
5. Press **MENU** to return to normal screen.

- If "AV2 SELECT" is set to "DECODER", it is impossible to set "AV1 SELECT" to "S-VIDEO".



```
        MODE SET
☞B.E.S.T.                ON
 PICTURE CONTROL       AUTO
 AUTO TIMER             OFF
 O.S.D.                  ON
 DIRECT REC              ON
 AUTO SP→LP TIMER       OFF
 POWER SAVE             OFF
 NEXT PAGE
[▲▼] → OK
[MENU] : EXIT
```

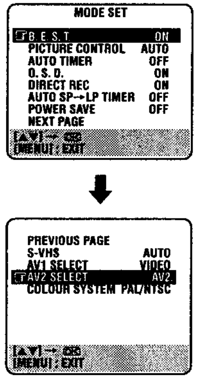
```
 PREVIOUS PAGE
 S-VHS                 AUTO
☞AV1 SELECT           VIDEO
 AV2 SELECT             AV2
 COLOUR SYSTEM    PAL/NTSC
[▲▼] → OK
[MENU] : EXIT
```

AV2 SELECT Setting

Set "AV2 SELECT" to the appropriate mode depending on the type of unit connected to the rear panel AV2 IN/DECODER connector of this recorder.

1. Press **MENU** to access the Main Menu screen.
2. Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.
3. Press △▽ to move the highlight bar (pointer) to "AV2 SELECT".
4. Press **OK** or ▷ to select "AV2", "DECODER" or "SAT".
   - a–AV2 : To use this recorder as the recording deck with the player connected to the AV2 IN/DECODER connector, or to use the satellite tuner connected to the AV2 IN/DECODER connector.
   - b–DECODER : To use a decoder connected to the AV2 IN/DECODER connector.
   - c–SAT : To view a satellite programme with the TV set while the recorder is in Timer mode, in Stop mode, recording or turned off. (☞ pg. 39)
5. Press **MENU** to return to normal screen.

- If you have a decoder connected to the AV2 IN/DECODER connector, be sure to set "AV2 SELECT" back to "DECODER" after editing.
- If you're not connecting a decoder to the AV2 IN/DECODER connector, leave "AV2 SELECT" set to "AV2".
- The default setting is "AV2"; if the recorder's memory backup has expired due to a power cut or because the AC was removed from the recorder, "AV2" will be automatically selected when the power is restored to the recorder. If you are using a decoder, be sure to set "AV2 SELECT" back to "DECODER".
- If the AV1 OUT switch on the rear panel is set to Y/C, it is impossible to set "AV2 SELECT" to "DECODER".



```
        MODE SET
☞B.E.S.T.                ON
 PICTURE CONTROL       AUTO
 AUTO TIMER             OFF
 O.S.D.                  ON
 DIRECT REC              ON
 AUTO SP→LP TIMER       OFF
 POWER SAVE             OFF
 NEXT PAGE
[▲▼] → OK
[MENU] : EXIT
```

```
 PREVIOUS PAGE
 S-VHS                 AUTO
 AV1 SELECT           VIDEO
☞AV2 SELECT             AV2
 COLOUR SYSTEM    PAL/NTSC
[▲▼] → OK
[MENU] : EXIT
```

Connection To A Satellite Tuner

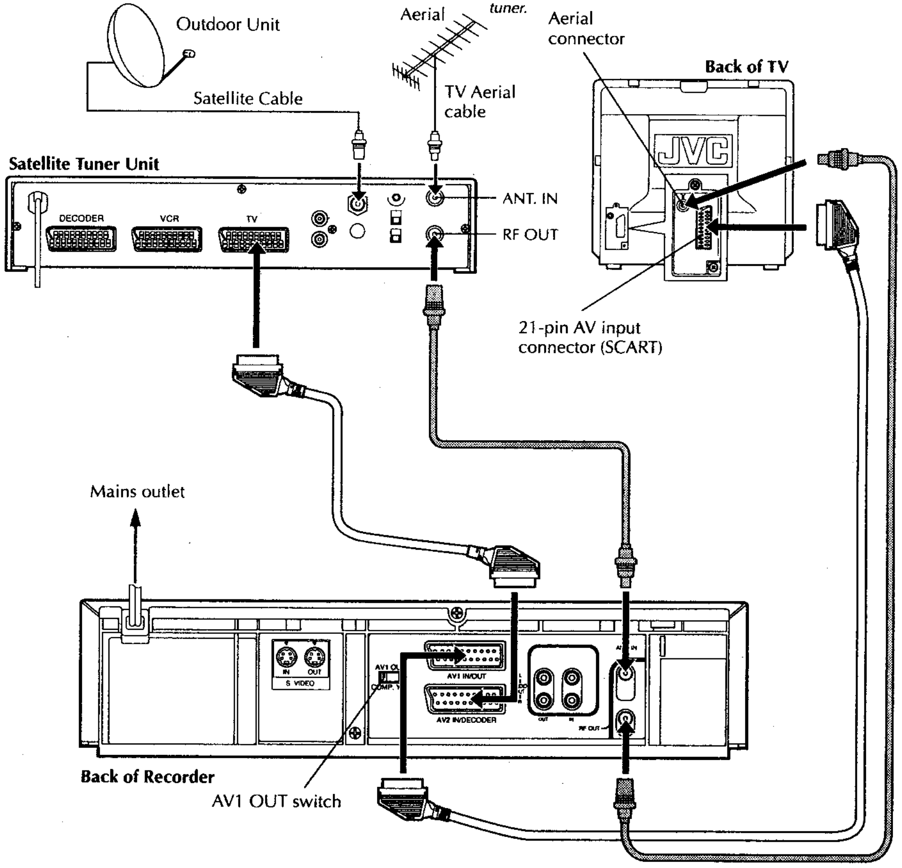
Simple Connections

This is an example of simple connection if you don't have a decoder.

Connect the satellite tuner to the video recorder's AV2 IN/DECODER connector, then connect the recorder's AV1 IN/OUT connector to the TV's 21-pin SCART connector.

NOTES:

- *Set "AV2 SELECT" to "AV2". (☞ pg. 38)*
- *You can use Automatic Satellite Program Recording function (☞ pg. 33) with this connection.*
- *To view a programme via the satellite tuner, select L-2 mode by pressing **NUMBER** keys and/or **TV PROG** so that "L-2" appears on the display panel.*
- *For details, refer to the instruction manual for the satellite tuner.*



IMPORTANT

When you set "AV2 SELECT" to "SAT" (☞ pg. 38), it is possible to view a satellite broadcast with the TV set to its AV mode even if the recorder is in Timer mode, in Stop mode, recording or turned off. When the recorder is in Stop mode or recording, press **TV/VCR** on the remote control to turn off the VCR indicator on the display panel.

- *In this case, be sure to set the **AV1 OUT** switch on the rear panel to COMP.*

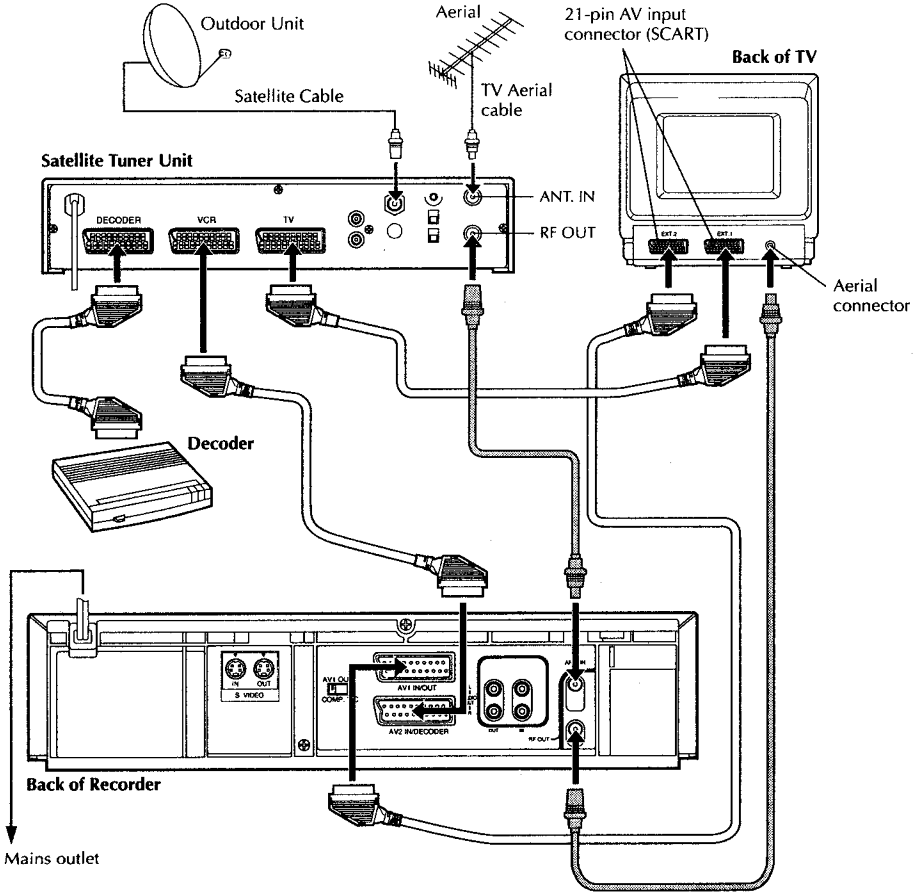
Perfect Connections

This is an example of recommended connection if you have both satellite tuner and decoder.

Connect the decoder to the satellite tuner's connector, AV1 IN/OUT connector to TV's connector, and AV2 IN/DECODER connector to the satellite tuner's connector. Then connect the satellite tuner and TV.

NOTES:

- *Set "AV2 SELECT" to "AV2". (☞ pg. 38)*
- *You can use Automatic Satellite Program Recording function (☞ pg. 33) with this connection.*
- *To view a programme via the satellite tuner, select L-2 mode by pressing **NUMBER** keys and/or **TV PROG** so that "L-2" appears on the display panel.*
- *To receive a scrambled broadcast, descramble the signal with the satellite tuner.*
- *For details, refer to the instruction manual for the satellite tuner and decoder.*


Outdoor Unit
Aerial
21-pin AV input connector (SCART)
Back of TV
Satellite Cable
TV Aerial cable
Satellite Tuner Unit
DECODER
VCR
TV
ANT. IN
RF OUT
Aerial connector
Decoder
AV1 IN/OUT
AV2 IN/DECODER
S VIDEO
IN
OUT
Back of Recorder
Mains outlet

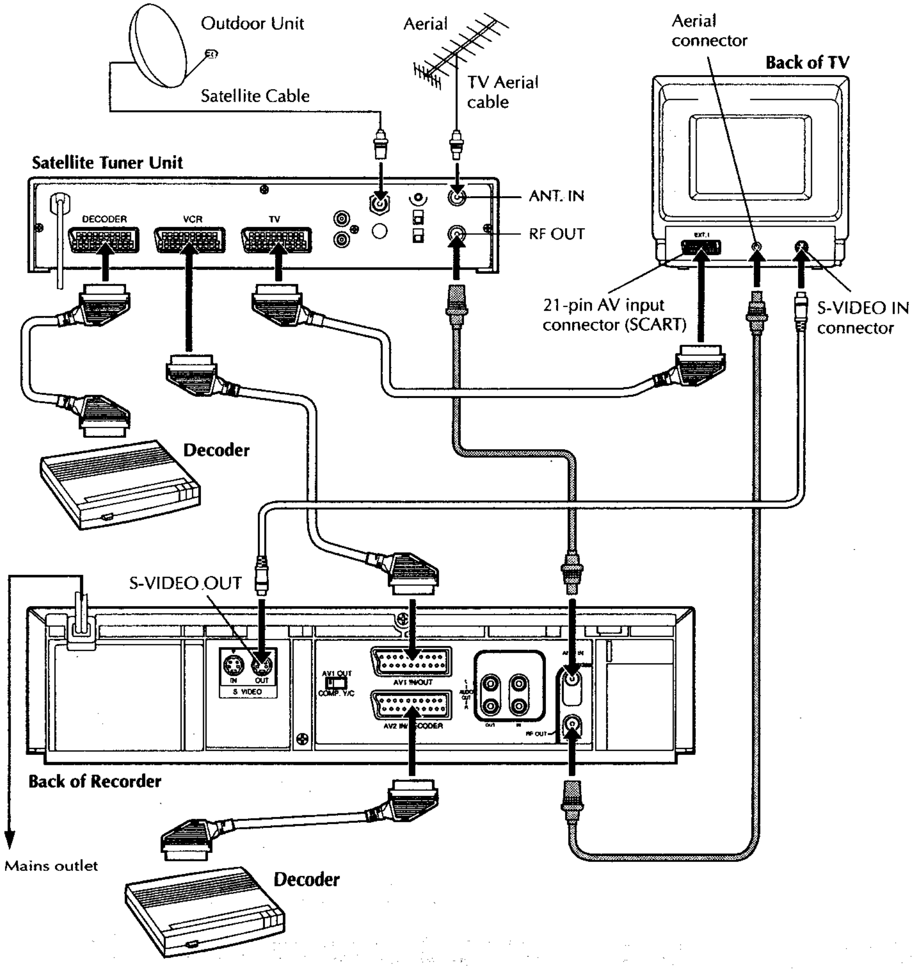
Basic Connections

This is an example of basic connection if you have both satellite tuner and decoder.

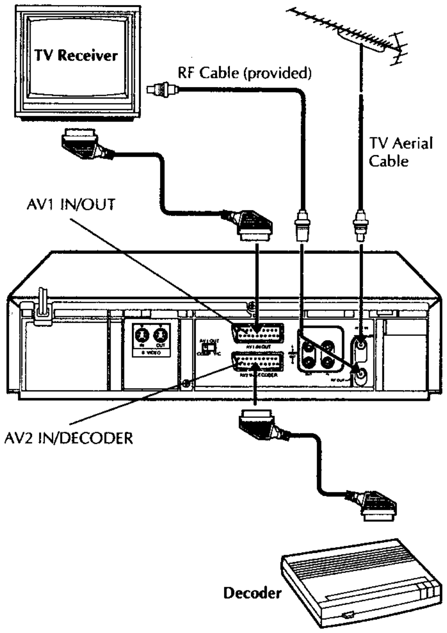
Connect the decoder to your recorder's AV2 IN/DECODER connector and AV1 IN/OUT connector to the satellite tuner's connector. Then connect the satellite tuner and TV. If you have a decoder for satellite broadcast, connect it to the satellite tuner's connector.

NOTES:

- *To record a satellite programme which delivers the Y/C signal, set "AV2 SELECT" to "AV2" and "AV1 SELECT" to "S-VIDEO". You can obtain high-quality S-VHS picture.*
- *If you connect your recorder and TV via S-Video cable VC-S211 (not provided), you can enjoy high-quality S-VHS pictures.*
- *Set "AV2 SELECT" to "DECODER" to view a scrambled broadcast. (☞ pg. 38)*
- *Automatic Satellite Program Recording function is not possible with this connection.*
- *To view a programme via the satellite tuner, select L-1 mode by pressing **NUMBER** keys and/or **TV PROG** so that "L-1" appears on the display panel.*
- *For details, refer to the instruction manual for the satellite tuner and decoder.*


Outdoor Unit
Aerial
Aerial connector
Back of TV
Satellite Cable
TV Aerial cable
Satellite Tuner Unit
DECODER
VCR
TV
ANT. IN
RF OUT
21-pin AV input connector (SCART)
S-VIDEO IN connector
Decoder
S-VIDEO OUT
AV1 IN/OUT
AV2 IN/DECODER
S VIDEO
IN
OUT
Back of Recorder
Mains outlet
Decoder

Connecting/ Using A Decoder


TV Receiver
RF Cable (provided)
TV Aerial Cable
AV1 IN/OUT
AV2 IN/DECODER
Decoder

The AV2 IN/DECODER connector can be used as an input terminal for an external decoder (descrambler). Simply connect a decoder and you can enjoy the variety of programming that is available through scrambled channels.

1 SELECT INPUT MODE

Set "AV2 SELECT" to "DECODER". (☞ pg. 38)

2 CONNECT DECODER

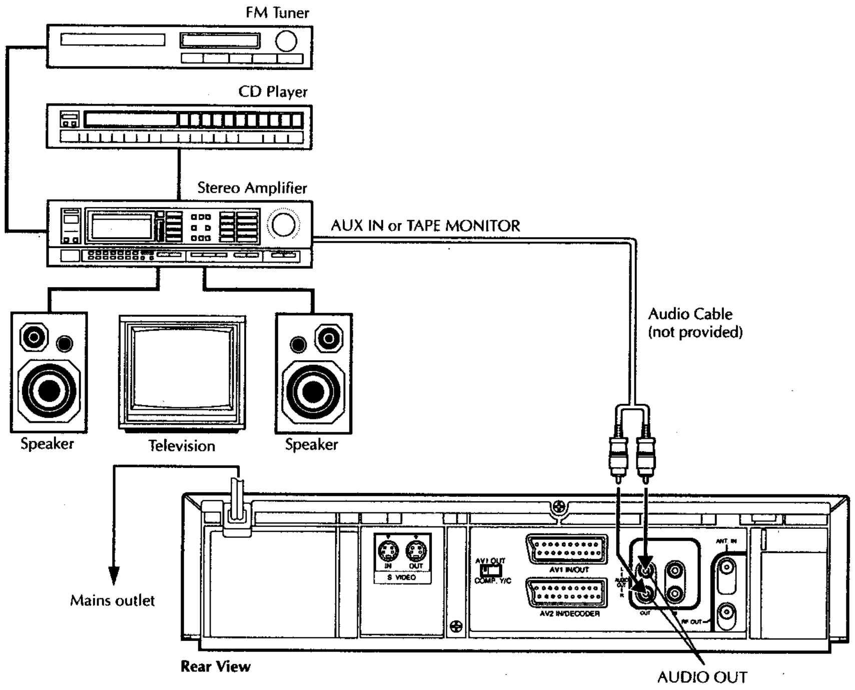
Connect your recorder's AV2 IN/DECODER connector to the decoder's Euroconnector using a 21-pin SCART cable.

3 SET TUNER

Perform the procedure as described in "When Receiving A Scrambled Broadcast" on page 47.

Connecting/ Using A Stereo System

These instructions enable you to connect your video recorder to your Hi-Fi stereo system (if you have one) and listen to the soundtrack through the stereo.


FM Tuner
CD Player
Stereo Amplifier
AUX IN or TAPE MONITOR
Audio Cable
(not provided)
Speaker
Television
Speaker
Mains outlet
Rear View
AUDIO OUT

1 MAKE CONNECTIONS

Connect the AUDIO OUT L and R connectors on your video recorder to the AUX IN or TAPE MONITOR terminals on your stereo system's receiver or amplifier.

NOTES:

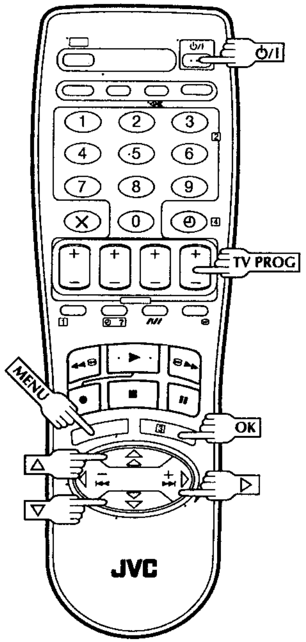
- *When connecting your recorder's audio output connectors to a stereo amplifier, make sure you connect L and R correctly.*
- *If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected stereo system.*
- *When listening to sound through the connected stereo system, turn the TV's volume down completely.*

CAUTIONS:

- This recorder has a dynamic range of more than 80 dB with regards to its Hi-Fi audio capability. It is recommended that you check the maximum level if you are going to listen to the Hi-Fi audio signals through a stereo amplifier. A sudden surge in the input level to the speakers may damage them.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set as this can adversely affect the video playback picture.

Tuner Set

Turn on the TV and select the VIDEO channel (or AV mode).



IMPORTANT

Perform the following steps only if —
— Auto Channel Set has not been set correctly by Auto Set Up function or by Preset Download (☞ pg. 6, 8).
— you have moved to a different area or if a new station starts broadcasting in your area.

Your recorder needs to memorize all necessary stations in channel positions in order to record TV programmes. Auto Channel Set automatically assigns all receivable stations in your area to call them up by using the **TV PROG** buttons without going through any vacant channel.

Auto Channel Set

1 TURN ON THE RECORDER

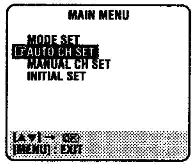
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS AUTO CH SET SCREEN

Press △▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK** or ▷.

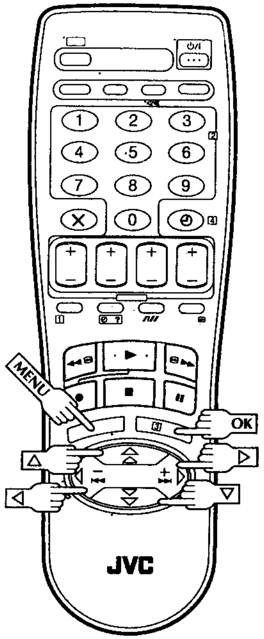

MAIN MENU
MODE SET
☞AUTO CH SET
MANUAL CH SET
INITIAL SET
[▲▼] → [OK]
[MENU] : EXIT

4 SELECT COUNTRY

Press △▽ to move the highlight bar (pointer) to your country's name, then press **OK** or ▷.

5 SELECT LANGUAGE

Press △▽ to move the highlight bar (pointer) to the language of your choice.



IMPORTANT

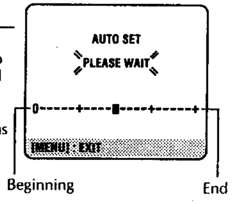
- In certain reception conditions, station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, when you timer-record a TV programme using ShowView, the recorder will record a TV programme of a different station. When programming the timer using ShowView, be sure to check whether the channel position on which your recorder receives the broadcasting station you wish to record is selected (☞ pg. 26, "ShowView Timer Programming").
- Your video recorder memorizes all detected stations even if reception of some of them is poor. In these cases picture quality may be poor. To delete those stations with an unacceptable picture ☞ "Delete A Channel" on page 47.

NOTES:

- *Fine tuning is performed automatically during Auto Channel Set. If you want to perform it manually, refer to page 50.*
- *If you perform Auto Channel Set when the aerial cable is not connected properly, "SCAN COMPLETED -NO SIGNAL-" appears on the screen in step 7. When this happens, make sure of the aerial connection and press **OK**; Auto Channel Set will take place again.*

6 PERFORM AUTO CHANNEL SET

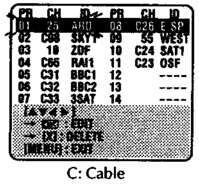
Press **OK** twice.


AUTO SET
PLEASE WAIT
[MENU] : EXIT

- You can set up the recorder's tuner also by Preset Download (☞ pg. 8).
- The Auto Set screen appears, and remains on screen while the recorder searches for receivable stations.
  As Auto Channel Set progresses, the "■" mark on the screen moves from left to right.
  Wait until the screen as shown in step 7 appears.

7 VIEW CONFIRMATION SCREEN

After "SCAN COMPLETED" is displayed on the screen for about 5 seconds, the Confirmation screen looking like the one to the right appears. The stations your recorder located appear on a Confirmation screen — channel positions (PR), channels (CH) and station names (ID – ☞ pg. 49). The blueback screen and the programme currently being broadcast by the blinking station appear alternately for 8 seconds each.
To view the next page, use the △▽ ◁▷ button on the remote control.



PR	CH	ID	PR	CH	ID
01	25	ARD	08	C26	E SP
02	C08	SKYT	09	55	WEST
03	10	ZDF	10	C24	SAT1
04	C66	RAI1	11	C23	OSF
05	C31	BBC1	12		----
06	C32	BBC2	13		----
07	C33	3SAT	14		----

[▲▼◀▶]
→ [OK] : EDIT
→ [X] : DELETE
[MENU] : EXIT

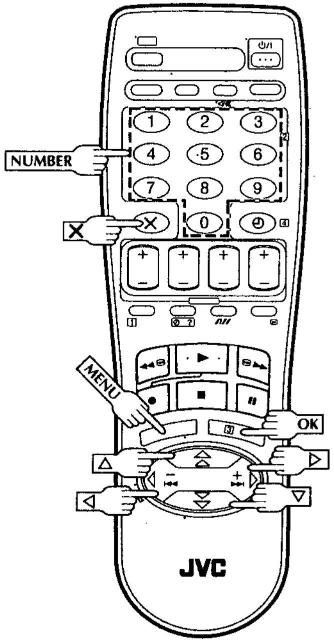
C: Cable

- The stations located in the selected country appear at the top of the list.
- The Guide Program numbers will also be set automatically during Auto Channel Set.

8 RETURN TO NORMAL SCREEN

Press **MENU**.

- Using the Confirmation screen, you can skip or add channel positions, enter station names and perform other operations. Refer to pages 46 – 50 for the procedures.
- Depending on reception conditions, the stations may not be stored in order, and the station names may not be stored correctly.
- For information on scrambled broadcasts, refer to page 47.



Storing Channels Manually

Store channels that were not stored during Auto Set Up (☞ pg. 6), Preset Download (☞ pg. 8) or Auto Channel Set (☞ pg. 44).

1 ACCESS MAIN MENU

Press **MENU**.

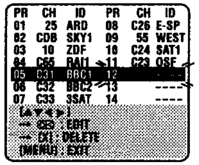
2 ACCESS CONFIRMATION SCREEN

Press △▽ to move the highlight bar (pointer) to "MANUAL CH SET", then press **OK** or ▷. The Confirmation screen appears.

3 SELECT POSITION

Press △▽ ◁▷ until an open position in which you want to store a channel begins blinking, then press **OK**. The Manual Channel Set screen appears.

(Ex.) To store in position 12.

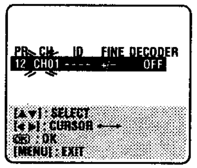


```
PR  CH   ID    PR  CH   ID
01   25  ARD   08  C26  E-SP
02  CDB  SKY1  09   55  WEST
03   10  ZDF   10  C24  SAT1
04  C65  RAI1  11  C23  OSF
05  C31  BBC1  12       ----
06  C32  BBC2  13       ----
07  C33  3SAT  14       ----
 [▲▼◀▶]
 → OK : EDIT
 → [X] : DELETE
 [MENU] : EXIT
```

The blueback screen and the programme currently being broadcast by the selected channel appear alternately for 8 seconds each.

4 SELECT BAND

Press △▽ to change the band between CH (regular) and CC (cable), then press ▷.



```
PR  CH    ID    FINE DECODER
12  CH01  ----  +/-      OFF

[▲▼] : SELECT
[◀▶] : CURSOR ←→
OK : OK
[MENU] : EXIT
```

The blueback screen and the programme currently being broadcast by the selected channel appear alternately for 8 seconds each.

5 INPUT CHANNEL

Press the **NUMBER** keys to input the channel number you want to store.

- Input "0" before any single number entries.
- To input the registered station name (ID – ☞ pg. 49), press ▷ until "----" (ID setting) begins blinking, then press △▽.
- For fine tuning adjustment, press ▷ until "+/–" begins blinking, then press △▽. While tuning, "+" or "–" appears.
- When storing a channel that sends scrambled broadcasts, press ▷ until "OFF" (Decoder setting) blinks, then press △▽ to set "DECODER" to "ON" ("OFF" is the default setting).
- When "AV2 SELECT" is set to "AV2", the "DECODER" setting cannot be changed (☞ pg. 38).

6 ENTER NEW CHANNEL INFORMATION

Press **OK** and the Confirmation screen appears.

- Repeat steps **3** through **6** as necessary.

7 CLOSE CONFIRMATION SCREEN

Press **MENU**.

- To change positions, see "Change Station Channel Position" (☞ pg. 47).
- If you wish to set station names other than the ones registered in your recorder, ☞ "Set Stations (B)" on page 48.

ATTENTION

Guide Program numbers are not set when channels are stored manually. If an attempt is made at timer programming with ShowView in this state, the "GUIDE PROG SET" screen appears; set the Guide Program numbers on this screen. ☞ "ATTENTION – Regarding Guide Program Number Set" on pg. 27.
Or perform "Guide Program Number Set" (☞ pg. 54).

Delete A Channel

Perform steps **1** and **2** of "Storing Channels Manually" on page 46 to access the Confirmation screen before continuing.

1 SELECT ITEM

Press △▽ ◁▷ until the item you want to delete begins blinking.

2 DELETE CHANNEL

Press X.

- The item directly beneath the cancelled one moves up one line.
- Repeat steps **1** and **2** as necessary.

3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

Change Station Channel Position

Perform steps **1** and **2** of "Storing Channels Manually" on page 46 to access the Confirmation screen before continuing.

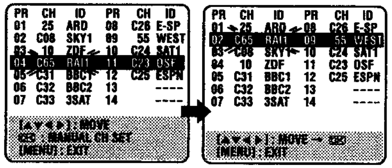
1 SELECT ITEM

Press △▽ ◁▷ until the item you want to move begins blinking. Then press **OK** and the station name (ID) and its channel (CH) number begin blinking.

2 SELECT NEW POSITION

Press △▽ ◁▷ to move the station to the new channel position, then press **OK**.

Example: If you moved the station in position 4 to position 2, the stations originally in positions 2 and 3 each move down one space.



```
PR  CH   ID    PR  CH   ID
01   25  ARD   08  C26  E-SP
02  C08  SKY1  09   55  WEST
03   10  ZDF   10  C24  SAT1
04  C65  RAI1  11  C23  OSF
05  C31  BBC1  12  C25  ESPN
06  C32  BBC2  13       ----
07  C33  3SAT  14       ----
[▲▼◀▶] : MOVE
OK : MANUAL CH SET
[MENU] : EXIT
```

```
PR  CH   ID    PR  CH   ID
01   25  ARD   08  C26  E-SP
02  C65  RAI1  09   55  WEST
03  C08  SKY1  10  C24  SAT1
04   10  ZDF   11  C23  OSF
05  C31  BBC1  12  C25  ESPN
06  C32  BBC2  13       ----
07  C33  3SAT  14       ----
[▲▼◀▶] : MOVE → OK
[MENU] : EXIT
```

- Repeat steps **1** and **2** as necessary.

3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

NOTE:

The characters available for the station name (ID) are A–Z, 0–9, –, ✱, +, ␣ (space) (maximum of 4).

When Receiving A Scrambled Broadcast

1 SELECT DECODER MODE

Set "AV2 SELECT" to "DECODER" (☞ pg. 38).

2 ACCESS CONFIRMATION SCREEN

Perform steps **1** and **2** of "Storing Channel Manually" on page 46.

3 SELECT POSITION

Press △▽ ◁▷ to select the channel position broadcasting scrambled programmes, then press **OK** twice.

4 CHANGE DECODER SETTING

Press ▷ until "OFF" (decoder setting) begins blinking, and set it to "ON" by pressing △▽.

5 RETURN TO CONFIRMATION SCREEN

Press **OK**.

- Repeat steps **3** through **5** as necessary.

6 CLOSE CONFIRMATION SCREEN

Press **MENU**.

ATTENTION

If channel positions are changed or deleted, the Guide Program numbers that have been set are reset.

- Example 1: If a channel is deleted, all the Guide Program numbers are reset.
- Example 2: If a channel is changed from position 4 to position 2, the Guide Program numbers above position 4 are reset.
- Example 3: If a channel is changed from position 4 to position 6, the Guide Program numbers above position 6 are reset.

* In Examples 2 and 3, if the channel is moved to position 10 before **OK** is pressed, the Guide Program numbers above position 10 are reset.
If an attempt is made at timer programming with ShowView in this state, the "GUIDE PROG SET" screen appears; set the Guide Program numbers on this screen. ☞ "ATTENTION – Regarding Guide Program Number Set" on pg. 27.
Or perform "Guide Program Number Set" (☞ pg. 54).

Set Stations (A)

Set station names that are registered in your recorder.

Perform steps **1** and **2** of "Storing Channels Manually" on page 46 to access the Confirmation screen before continuing.

1 SELECT ITEM

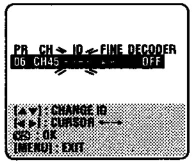
Press △▽ ◁▷ until the item you want begins blinking.

2 ACCESS MANUAL CHANNEL SET SCREEN

Press **OK** twice.

3 SELECT NEW STATION

Press ▷ until the station name (ID) begins blinking, then press △▽ until the new station's name (ID) you want to store begins blinking.
Registered station names (☞ pg. 49) appear as you press △▽.



4 SWITCH STATIONS

Press **OK**.

- The Confirmation screen appears.
- Repeat steps **1** through **4** as necessary.

5 CLOSE CONFIRMATION SCREEN

Press **MENU**.

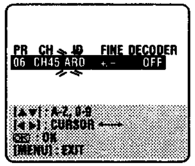
Set Stations (B)

Set station names other than the ones registered in your recorder.

Perform steps **1** and **2** of "Storing Channels Manually" on page 46 to access the Confirmation screen and then perform step **1** and **2** of "Set Stations (A)" on the left before continuing.

1 SELECT STATION NAME CHARACTER

Press ▷ until the first letter of the station name begins blinking.



2 ENTER NEW CHARACTER

Press △▽ to cycle through the characters (A–Z, 0–9, –, ✱, +, ⎵ (space)) and stop when the desired character is indicated, then press ▷ to enter. Enter the remaining characters the same way (maximum of 4).
After entering all characters, press **OK**.

- The Confirmation screen appears.
- If you make a mistake, press ◁ until the incorrect character begins blinking. Then enter the correct character by pressing △▽.

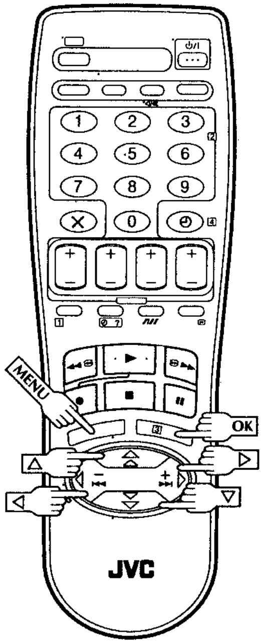
3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

TV Station And ID List

ID*	STATION NAME
1000	TV1000
3SAT	3SAT
ADLT	ADULT
ANT3	ANTENA3
ARD	ARD
ARTE	ARTE
BBC	BBC GROUP
BBC1	BBC1
BBC2	BBC2
BR3	BAYERN3
C+	CANAL PLUS
C1	PORTUGUSES
CAN5	CANALE5
CANV	KETNET CANVAS
CH4	CHANNEL4
CH5	CHANNEL5
CHLD	CHILD
CINE	CINEMA
CLUB	TELECLUB
CMT	CMT
CNN	CNN
CSUR	ANDALUCIA
DISC	DISCOVERY
DR	DR TV
DRS	DRS
DSF	DSF
ETB1	ETB1
ETB2	ETB2
EURO	EURONEWS
EUSP	EUROSPORTS
FEMM	FEMMAN
FILM	FILM
FNET	FILMNET
FR2	France2
FR3	France3
GALA	GALAVISION
HR3	HESSEN3
INFO	INFO-KANAL
ITA1	ITALIA1
ITA7	ITALIA7
ITV	ITV
JSTV	JSTV
KA2	KA2
KAB1	KABEL1
KAN2	KANAL2
LOCA	LOCAL
M6	M6
MBC	MBR
MCM	MCM
MDR	MDR
MOVE	MOVIE
MTV	MTV
MTV3	MTV3
N3	NORD3
N-TV	N-TV
NBC	NBC SUPER
NDR3	NDR3
NED1	NED1
NED2	NED2
NED3	NED3
NEWS	
NICK	NICKELODEON
NRK	NRK
NRK2	NRK2
ODE	ODEON
ORF1	ORF1
ORF2	ORF2
ORF3	ORF3
OWL3	OWL3
PREM	PREMIERE
PRO7	PRO7
RAI1	RAI1
RAI2	RAI2
RAI3	RAI3
RET4	RETE4
21	TELE21
RTBF	RTBF1 or 2
RTL	RTL
RTL2	RTL2
RTL4	RTL4
RTL5	RTL5
RTP	RTP
S4	SCHWEIZ4
SAT1	SAT1
SBS	SBS
SHOW	SHOW
SIC	SOCIEDADE
SKY	SKY CHANNEL
SKYN	SKY NEWS
SPRT	SPORT
SRTL	SUPER RTL
STAR	STAR-TV
SVT1	SVT1
SVT2	SVT2
SWR	SUEDWEST3
TCC	TCC
TELE	TELE
TEL5	TELE5
TF1	TF1
TM3	TM3
TMC	TELEMONTECARLO
TNT	TNT INT
TRT	TRT INT
TSI	TSI
TSR	TSR
TV1	BRTN TV1
TV2	TV2
TV3	TV3
TV4	TV4
TV5	TV5
TV6	TV6
TVE1	TVE1
TVE2	TVE2
TVG	TV GALICIA
TVI	TV INDEPENDENT
TVN	TV NORGE
VCR	VIDEO
VERO	VERONICA
VH-1	VH-1
VIVA	VIVA
VIV2	VIVA2
VMTV	VIDEO MUSIC
VOX	VOX
VT4	VT4
VTM	VTM
WDR1	West1
WDR3	West3
YLE1	YLE1
YLE2	YLE2
ZDF	ZDF
ZTV	ZTV

* The "ID" abbreviation is what is shown on-screen in lieu of the station name. The "ID" abbreviation is listed in the Confirmation screen and is displayed on the TV screen when the recorder is tuned to a different station.



Fine-Tuning Channels Already Stored

Perform steps **1** and **2** of "Storing Channels Manually" on page 46 to access the Confirmation screen before continuing.

1

SELECT CHANNEL TO FINE-TUNE

Press △▽ ◁▷ until the channel you want to tune begins blinking.

2

ACCESS MANUAL CHANNEL SET SCREEN

Press **OK** twice. The Manual Channel Set screen appears.

3

PERFORM TUNING

Press ▷ until "+/–" begins blinking, then press △▽ until the picture is its clearest. Then press **OK**.

- The Confirmation screen appears.
- Repeat steps **1** through **3** as necessary.

4

CLOSE CONFIRMATION SCREEN

Press **MENU**.

Video Channel Set

Video Channel (RF Output Channel) is the channel on which your TV receives picture and sound signals from the video recorder through the RF cable.

IMPORTANT

Perform the following steps only if —

— interference appears in the TV picture after you have moved to a different area or a new station has started broadcasting in your area.

— you change the connection between your recorder and TV from RF connection to AV or S-VIDEO connection, or vice versa.

If you have connected the video recorder to your TV via both the provided RF cable and a 21-pin SCART cable (AV connection), or via the provided RF cable, an S-Video cable and an audio cable (S-VIDEO connection), since you do not need the video channel you have to set the video channel to off.

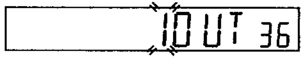
If you have connected the video recorder to your TV via the RF cable only (RF connection), you have to set the correct video channel.

Before performing the following steps, make sure the recorder's power is off and there is no cassette inserted in the recorder.

1

ACCESS VIDEO CHANNEL SET MODE

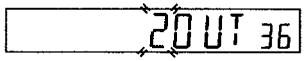
Hold down **STOP** (■/⏏) on the recorder until the display panel shows the following.



2

SET RF OUTPUT SYSTEM

The blinking number on the display indicates the RF output system of your country. If you have selected MAGYARORSZAG (36), CESKA REPUBLIKA (42), POLSKA (48) or OTHER EASTERN EUROPE (EE) for the country setting (pg. 6, 10), press △▽ to set to "2". For other countries, set to "1". Then press **OK**.
(1: B/G 2: D/K)

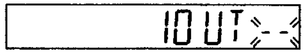


3

SET VIDEO CHANNEL

With AV Connection or S-VIDEO Connection

Press **TV PROG** – until the display panel shows "1OUT– –" (or "2OUT– –").

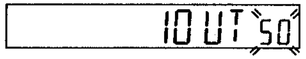


- Now the video channel is set to off.

With RF Connection

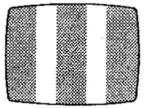
Press **TV PROG** + or – to set the video recorder to a vacant channel between 22 and 69 which is not occupied by any local station in your area.

(Ex.) If channel 50 is available in your area



Then set your TV to UHF channel 50.

- If the two vertical white bars appear clearly on the screen as shown to the right, go to step **4**.
- If the two vertical white bars do not appear clearly, re-set the video recorder to another vacant channel and try again.



NOTES:

- *If you set the video recorder to a channel which is occupied by a local station or has neighbouring channels that are occupied by local stations, the picture reception quality will be affected and some interference noise will appear on the TV screen. Be sure to select a vacant channel which has no broadcast on neighbouring channels.*
- *If you cannot obtain the two vertical white bars clearly with any channel between 22 and 69, consult your JVC dealer.*

4

EXIT VIDEO CHANNEL SET MODE

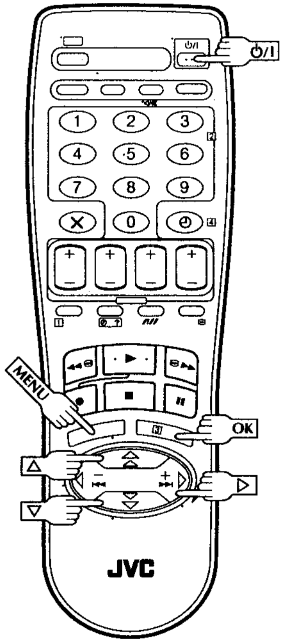
Press **OK** on the remote control.

With AV Connection or S-VIDEO Connection:
To view picture signals from the video recorder, set your TV to its AV mode.

With RF Connection:
The channel on which the screen in step 3 appears clearly is your video channel.
To view picture signals from the video recorder, set your TV to the Video Channel.

Clock Set

Turn on the TV and select the VIDEO channel (or AV mode).



Just Clock
The Just Clock function provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal.
The Just Clock option can be set "ON" or "OFF" at the Clock Set screen (the default setting is "OFF"). Press **OK** until the Just Clock setting begins blinking, then press △▽ to change the setting.

IMPORTANT: If you turn off Just Clock, the accuracy of your recorder's built-in clock may be reduced, which could adversely effect timer recording. We recommend you to keep Just Clock on. In cases where the clock setting data from a PDC signal is incorrect, however, you are advised to keep Just Clock set to "OFF".

IMPORTANT

If you performed Auto Set Up (☞ pg. 6), Preset Download (☞ pg. 8) or Auto Channel Set (☞ pg. 44), without ever having set the clock previously, the recorder's built-in clock is also set automatically.
Perform the following steps only if —
— Auto Clock Set has not been performed correctly by Auto Set Up, Preset Download or Auto Channel Set.
or
— the recorder's memory backup has expired.
or
— you want to change Just Clock setting (☞ "Just Clock" in the left column).

1 TURN THE RECORDER ON

Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

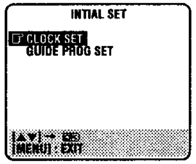
Press **MENU**.

3 ACCESS INITIAL SET SCREEN

Move the highlight bar (pointer) to "INITIAL SET" by pressing △▽, then press **OK** or ▷.

4 ACCESS CLOCK SET SCREEN

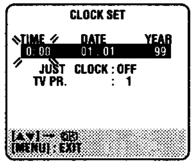
Move the highlight bar (pointer) to "CLOCK SET" by pressing △▽, then press **OK** or ▷. The Clock Set screen appears.



INTIAL SET

☞ CLOCK SET
GUIDE PROG SET

[▲▼] → OK
[MENU] : EXIT



CLOCK SET

TIME DATE YEAR
0:00 01.01 99
JUST CLOCK : OFF
TV PR. : 1

[▲▼] → OK
[MENU] : EXIT

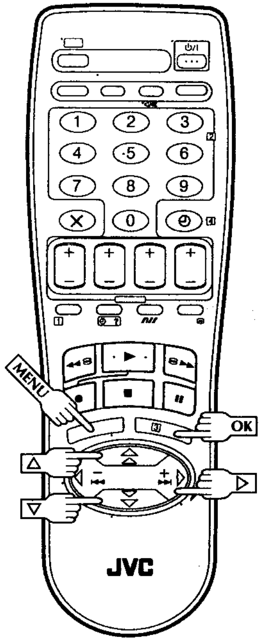
NOTE:

When you have selected MAGYARORSZAG (36), CESKA REPUBLIKA (42), POLSKA (48) or OTHER EASTERN EUROPE (EE) for the country setting (☞ pg. 6, 10), you cannot use Just Clock function. Skip steps **6** and **7** on page 53.

5 SET DATE AND TIME

Press △▽ to set the time, then press **OK** or ▷. The "date" display begins blinking. Repeat the same procedure to set the date and year.

- When you set the time, press and hold △▽ to change the time by 30 minutes.
- When you set the date, press and hold △▽ to change the date by 15 days.



6 SET JUST CLOCK

The default setting is "OFF". Set as desired by pressing △▽, then press **OK** or ▷.

- For the Just clock function, ☞ "Just Clock" on page 52.
- If you set to "OFF", you can disregard the next step as you won't be able to receive regular clock adjustments.

7 SET CLOCK DATA SOURCE CHANNEL POSITION

The recorder is preset to receive clock setting and adjustment data from channel position 1. Press △▽ to set the channel position to the number representing the station transmitting clock setting data, then press **OK** or ▷.

8 START CLOCK OPERATION

Press **MENU**.

NOTES:

- *Just Clock (when set to "ON") adjusts the recorder's built-in clock every hour, except for 23:00, 0:00, 1:00 and 2:00.*
- *Just Clock is not effective when . . .*
  - *the recorder's power is on.*
  - *the recorder is in the Timer mode.*
  - *a difference of more than 3 minutes exists between the built-in clock's time and the actual time.*
  - *the recorder is in the Auto Satellite Prog Rec mode (☞ pg. 33).*
  - *the recorder is in the Power Save mode (☞ pg. 12).*
- *If Just Clock is set to "ON", the recorder's clock is automatically adjusted at the start/end of Summer Time.*
- *Just Clock may not function properly depending on the reception condition.*

SHOWVIEW Setup

IMPORTANT

Normally, Auto Set Up (☞ pg. 6), Preset Download (☞ pg. 8) or Auto Channel Set (☞ pg. 44) sets the Guide Program Numbers automatically. You need to set the Guide Program Numbers manually only in the following cases.

- *When timer-programming with SHOWVIEW, the channel position, where the station you wish to record is received on your recorder, is not selected or when you add a channel after Auto Set Up or Auto Channel Set has taken place.*

— Set the Guide Program Number for that station manually.

- *When you delete a channel or change channel positions manually after Auto Set Up or Auto Channel Set has taken place.*

— Set the Guide Program Numbers for all the receivable stations manually.

- *When you wish to timer-record a satellite programme with SHOWVIEW.*

— Set the Guide Program Numbers for all satellite broadcasts received on your satellite tuner.

Turn on the TV and select the VIDEO channel (or AV mode).

Guide Program Number Set

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

2 ACCESS INITIAL SET SCREEN

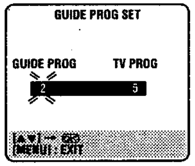
Press △▽ to move the highlight bar (pointer) to "INITIAL SET", then press **OK** or ▷.

3 ACCESS GUIDE PROG SET SCREEN

Press △▽ to move the highlight bar (pointer) to "GUIDE PROG SET", then press **OK** or ▷.

4 ENTER GUIDE PROG NUMBER

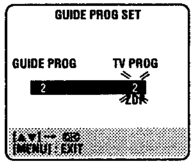
Press △▽ or **NUMBER** keys to enter the Guide Program number for the desired station as shown in the TV listings. Then press **OK** or ▷.



(Ex.) When inputting the Guide Program number 2 for ZDF.

5 ENTER RECEIVING CHANNEL POSITION NUMBER

Press △▽ or **NUMBER** keys to input the number of the recorder's channel position on which the Guide Program number's broadcast is received. Then press **OK** or ▷.



(Ex.) If ZDF is received on channel position 2.

- If the satellite broadcast is received on your recorder's auxiliary channel "L-2", select "L-2" for the channel position.
- Repeat steps **4** and **5** as necessary.

6 RETURN TO NORMAL SCREEN

Press **MENU**.

Guide Program Number

"Guide Program (GUIDE PROG) number" refers to the assigned TV station numbers, according to broadcast area, for SHOWVIEW timer recording. The Guide Program numbers can be found in most TV listings.

Before requesting service for a problem, use this chart and see if you can repair the trouble yourself. Small problems are often easily corrected, and this can save you the trouble of sending your video recorder off for repair.

POWER

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. No power is applied to the recorder.	● The mains power cord is disconnected.	Connect the mains power cord.
2. The clock is functioning properly, but the recorder cannot be powered.	● "◷" is displayed on the display panel with Auto Timer set to "OFF".	Press the ◷ button to turn the "◷" indicator off.
3. The remote control won't function.	● The batteries are discharged.	Replace the dead batteries with new ones.

TAPE TRANSPORT

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The tape does not run during recording.	● "▦" is displayed on the display panel.	Press **PLAY** to turn the "▦" indicator off.
2. The tape will not rewind or fast-forward.	● The tape is already fully rewound or fast-forwarded.	Check the cassette.

PLAYBACK

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The playback picture does not appear while the tape is running.	● If you're using the RF OUT connection . . . . . . the TV receiver's channel selector is not set to the VIDEO channel. . . . the recorder's VIDEO channel has not been correctly set. ● If you're using the AV or S-VIDEO connection, the TV receiver is not set to the AV mode.	If you are using the RF OUT connection . . . . . . set the TV receiver to the VIDEO channel. . . . perform "Video Channel Set". (☞ pg. 51) If you are using the AV or S-VIDEO connection, set the TV to its AV mode.
2. Noise appears during visual search.	● This is normal.	
3. Noise appears during normal playback.	● The automatic tracking mode is engaged.	Try manual tracking. (☞ pg. 17)
4. The playback picture is blurred or interrupted while TV broadcasts are clear.	● The video heads may be dirty.	Consult your JVC dealer.
5. Breaks are noticeable in Hi-Fi soundtrack.	● Automatic tracking is engaged.	Engage and adjust tracking manually. (☞ pg. 17)

RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Recording cannot be started.	● There is no cassette loaded, or the cassette loaded has had its Record Safety tab removed.	Insert a cassette, or using adhesive tape, reseal the slot where the tab was removed.
2. TV broadcasts cannot be recorded.	● "L-1", "L-2" or "S-1" has been selected as the input mode.	Set to the desired channel.
3. Tape-to-tape editing is not possible.	● The source (another video recorder, camcorder) has not been properly connected. ● All necessary power switches have not been turned on. ● The input mode is not correct.	Confirm that the source is properly connected. Confirm that all units' power switches are turned on. Set the input mode to "L-1", "L-2" or "S-1".
4. Camcorder recording is not possible.	● The camcorder has not been properly connected. ● The input mode is not correct.	Confirm that the camcorder is properly connected. Set the input mode to "L-1", "L-2" or "S-1".

TIMER RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Timer recording won't work.	• The clock and/or the timer have been set incorrectly. • The timer is not engaged.	Re-perform the clock and/or timer settings. Press ⏲ and confirm that "⏲" is displayed on the display panel.
2. Timer programming is not possible.	• Timer recording is in progress.	Timer programming can't be performed while a timer recording is in progress. Wait until it finishes.
3. "⏲" and "📼" on the display panel won't stop blinking.	• The timer is engaged but there's no cassette loaded.	Load a cassette with the Record Safety tab intact, or cover the hole using adhesive tape.
4. The cassette is automatically ejected, and "⏲" and "📼" on the display panel won't stop blinking.	• The loaded cassette has had its Record Safety tab removed.	Remove the cassette and cover the hole with adhesive tape, or insert a cassette with the Record Safety tab intact.
5. "⏲" blinks for 10 seconds and the Timer mode is disengaged.	• ⏲ has been pressed when there are no programs in memory, or the timer record information has been programmed incorrectly.	Check the programmed data and re-program as necessary, then press ⏲ again.
6. The cassette is automatically ejected, the power shuts off and "⏲" and "📼" won't stop blinking.	• The end of the tape was reached during timer recording.	The programme may not have been recorded in its entirety. Next time make sure you have enough time on the tape to record the entire programme.
7. SHOWVIEW does not timer-record properly.	• The recorder's channel positions have been set incorrectly.	Refer to "Guide Program Number Set" and re-perform the procedure (☞ pg. 54).

OTHER PROBLEMS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Whistling or howling is heard from the TV during camcorder recording.	• The camcorder's microphone is too close to the TV. • The TV's volume is too high.	Position the camcorder so its microphone is away from the TV. Turn the TV's volume down.
2. When scanning channels, some of them are skipped over.	• Those channels have been designated to be skipped.	If you need the skipped channels, restore them (☞ pg. 46).
3. The channel cannot be changed.	• Recording is in progress.	Press **PAUSE** to pause the recording, change channels, then press **PLAY** to resume recording.
4. Channel settings that were made manually seem to have changed or disappeared.	• After the manual settings were made, Auto Channel Set was performed.	Perform manual setting again.
5. No channels are stored in the recorder's memory.	• The TV aerial cable was not connected to the recorder when Auto Set Up was performed.	Connect the TV aerial cable to the recorder properly and turn off the recorder power once, then turn the recorder power back on again. The recorder will try Auto Set Up again (☞ pg. 6).

QUESTIONS AND ANSWERS

PLAYBACK

Q. What happens if the end of the tape is reached during playback or search?
A. The tape is automatically rewound to the beginning.

……

Q. Can the video recorder indefinitely remain in the still mode?
A. No. It stops automatically after 5 minutes to protect the heads.

……

Q. During search, slow, still and frame-by-frame playback, I can't hear any audio. What's the problem?
A. This is normal.

……

Q. When returning from multi-speed search to normal playback, the picture is disturbed. Should I be concerned about this?
A. No, it is normal.

……

Q. Noise bars appear during multi-speed search. What's the problem?
A. This is normal.

……

Q. Sometimes, during Index Search, the video recorder can't find the programme I want to see. Why not?
A. There may be index codes too close together.

……

RECORDING

Q. When I pause and then resume a recording, the end of the recording before the pause is overlapped by the beginning of the continuation of recording. Why does this happen?
A. This is normal. It reduces distortion at the pause and resume points.

……

Q. Can the video recorder indefinitely remain in the Record-Pause mode?
A. No. The video recorder goes to its Stop mode automatically after 5 minutes to protect the heads.

……

Q. What happens if the tape runs out during recording?
A. The video recorder automatically rewinds it to the beginning.

……

TIMER RECORDING

Q. "○" and "⏲" remain lit on the display panel. Is there a problem?
A. No. This is a normal condition for a timer recording in progress.

……

Q. Can I programme the timer while I'm watching a tape or a TV broadcast?
A. You won't see the picture as it is replaced by the on-screen menu, but the audio from the programme or tape you're viewing can be heard.

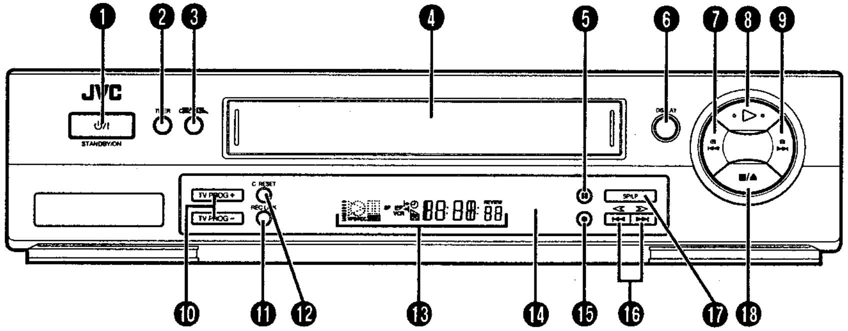
……

Q. Is it possible to timer-record a TV programme broadcast in 2000?
A. Yes, it is possible.

……

ATTENTION
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the recorder off and unplug the mains power cord. Then plug it in again and turn the recorder on. Take out the cassette. After checking the cassette, operate the unit as usual.

FRONT VIEW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❷
❸
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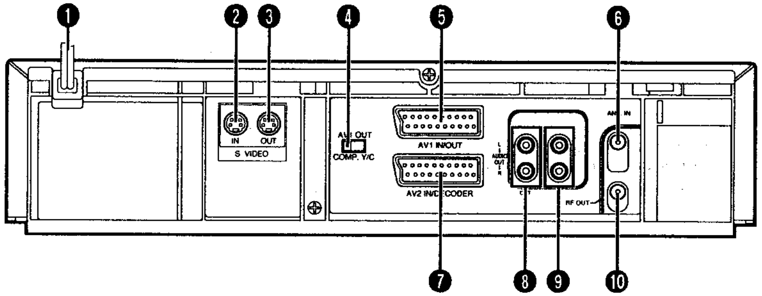
❻
❼
❽
❾
❿
⓫
⓬
⓭
⓮
⓯
⓰
⓱
⓲
JVC
STANDBY/ON
TV PROG +
TV PROG −
C. RESET
REC LINK
DISPLAY
SP/LP

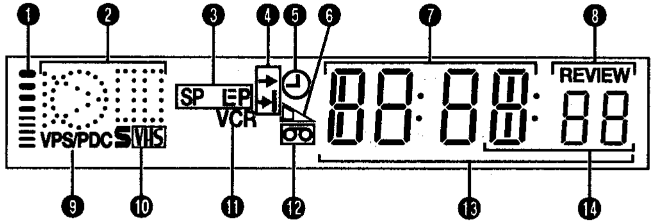
❶ STANDBY/ON ⏻/I Button ☞ pg. 6
❷ TIMER Button ☞ pg. 27, 29
❸ REVIEW Button ☞ pg. 19
❹ Cassette Loading Slot
❺ PAUSE Button ☞ pg. 16
❻ DISPLAY Button ☞ pg. 21
❼ Rewind [REW] Button ☞ pg. 15, 16
❽ PLAY Button ☞ pg. 15
❾ Fast Forward [FF] Button ☞ pg. 15, 16
❿ TV PROG +/– Buttons ☞ pg. 20
⓫ REC LINK Button ☞ pg. 33
⓬ Counter Reset (C. RESET) Button ☞ pg. 21
⓭ Display Panel ☞ pg. 59
⓮ Infrared Beam Receiving Window
⓯ RECORD Button ☞ pg. 20
⓰ << ⏮ and ⏭ >> Buttons — same as ◁▷ Button on remote control ☞ pg. 16, 18
⓱ SP/LP Button ☞ pg. 20
⓲ STOP/EJECT Button ☞ pg. 15

REAR VIEW


❶
❷
❸
❹
❺
❻
❼
❽
❾
❿
IN
OUT
S VIDEO
AV1 OUT
COMP. Y/C
AV1 IN/OUT
AV2 IN/DECODER
ANT. IN
RF OUT

❶ Mains Power Cord ☞ pg. 4
❷ S-VIDEO IN Connector ☞ pg. 35
❸ S-VIDEO OUT Connector ☞ pg. 5
❹ AV1 OUT Switch ☞ pg. 4
❺ AV1 IN/OUT Connector ☞ pg. 4, 36, 39 – 42
❻ ANT. IN Connector ☞ pg. 4
❼ AV2 IN/DECODER Connector ☞ pg. 36, 39 – 42
❽ AUDIO OUT (L/R) Connectors ☞ pg. 43
❾ AUDIO IN (L/R) Connectors ☞ pg. 35
❿ RF OUT Connector ☞ pg. 4

DISPLAY PANEL


❶
❷
❸
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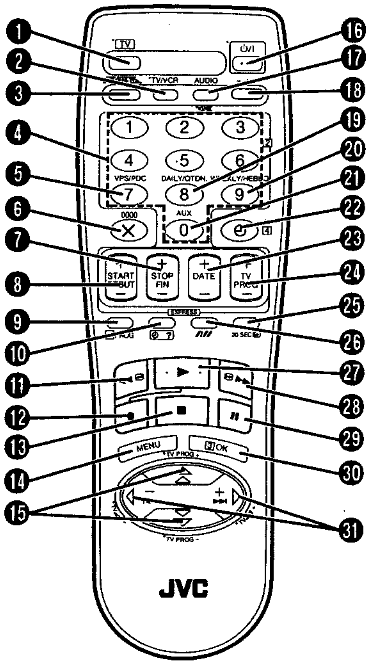
❼
❽
❾
❿
⓫
⓬
⓭
⓮
SP
EP
VCR
REVIEW
VPS/PDC
S VHS

❶ B.E.S.T. Picture System Display ☞ pg. 24
❷ Symbolic Mode Indicators

PLAY: FF/REW VARIABLE SEARCH:	▷	STILL: SLOW:	▷⏸
		RECORD:	○
		RECORD PAUSE:	○⏸

❸ Tape Speed Indicators ☞ pg. 20
** EP is only for NTSC playback.*
❹ Programme Time Indicators ☞ pg. 28
❺ "Timer" Indicator ☞ pg. 27, 29
❻ Tape Remaining Time Indicator ☞ pg. 21
❼ Channel/Clock Display ☞ pg. 9
❽ Instant REVIEW Indicator ☞ pg. 19
❾ VPS/PDC Indicator ☞ pg. 27, 29
❿ S-VHS Indicator ☞ pg. 22
⓫ VCR Indicator ☞ pg. 21
⓬ "Cassette Loaded" Mark
⓭ Counter/Remain Display
⓮ Mode Display (L-1, L-2 or S-1)

REMOTE CONTROL



Buttons with a small dot on the left side of the name can also be used to operate your JVC TV while holding down the **TV** button. ☞ "Operating JVC TVs" below.

This remote control transmits A code signals only; it is not applicable to B code signals.

❶ TV Button ☞ "Operating JVC TVs" below
❷ TV/VCR Button ☞ pg. 21 and "Operating JVC TVs" below
❸ REVIEW Button ☞ pg. 19
❹ NUMBER Keys ☞ pg. 20, 26
❺ VPS/PDC Button ☞ pg. 27, 29
❻ X Button ☞ pg. 26, 30
0000 Button ☞ pg. 21
❼ STOP +/– Button ☞ pg. 28
❽ START +/– Button ☞ pg. 28
❾ PROG Button ☞ pg. 26
❿ ⊕ ? Button ☞ pg. 30
⓫ Rewind [REW] Button ☞ pg. 15, 16
⓬ Record Button ☞ pg. 20
⓭ Stop Button ☞ pg. 15, 20
⓮ MENU Button ☞ pg. 10
⓯ △▽ Button ☞ pg. 6
TV PROG +/– ☞ "Operating JVC TVs" below
⓰ STANDBY/ON ⏻/I Button ☞ pg. 6
⓱ AUDIO Button ☞ pg. 19
🔈/🔇 (TV Muting) Button ☞ "Operating JVC TVs" below
⓲ DISPLAY Button ☞ pg. 21
⓳ DAILY Button ☞ pg. 27, 29
⓴ WEEKLY Button ☞ pg. 27, 29
㉑ AUX Button ☞ pg. 35
㉒ ⊕ Button ☞ pg. 27, 29
㉓ DATE +/– Button ☞ pg. 28
㉔ TV PROG +/– Button ☞ pg. 20
㉕ 30 SEC Button ☞ pg. 17
㉖ Auto Tracking Button ☞ pg. 17
SP/LP Button ☞ pg. 20
㉗ Play Button ☞ pg. 15
㉘ Fast Forward [FF] Button ☞ pg. 15, 16
㉙ Pause Button ☞ pg. 16
㉚ OK Button ☞ pg. 6
㉛ ◁▷ Button ☞ pg. 16, 18
TV ◿ +/– Button ☞ "Operating JVC TVs" below

How To Use

The remote control can operate most of your video recorder's functions, as well as basic functions of JVC TV sets. (See the right column.)

- Point the remote control toward the sensor window.
- The maximum operating distance of the remote control is about 8 m.

Operating JVC TVs

To operate your TV, while holding down the **TV** button, press the corresponding button: **STANDBY/ON** ⏻/I, **TV/VCR, TV PROG +/–, TV** ◿ **+/–**, 🔈/🔇 (TV Muting).

NOTES:

- *When inserting the batteries, be sure to insert in the correct directions as indicated under the battery cover.*
- *Depending on the type of JVC TV, there may be cases where some or all functions cannot be operated using the remote control.*
- *If the remote control doesn't work properly, remove its batteries, wait a short time, replace the batteries and then try again.*

EN

HR-S6600/6611EU

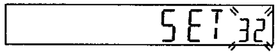
Auto Set Up – referring to the display panel

The Auto Set Up function sets the tuner channels, clock and Guide Program numbers automatically.

BEFORE YOU START PLEASE MAKE SURE THAT:

- ■ The TV aerial cable is connected to the ANT.IN jack on the rear panel of the video recorder.
- ■ The video recorder's mains power cord is connected to a mains outlet.
- ■ The video recorder is turned off.
- ■ Load batteries into the remote control.

1 Press ⏻/I (recorder/remote).



2 Press △▽ (remote) to select the international telephone country code.

(Ex.) DEUTSCHLAND is selected.

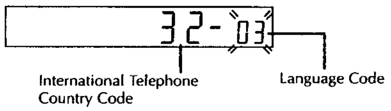
International Telephone Country Code

BELGIUM	: 32	NORGE	: 47
ČESKÁ REPUBLIKA	: 42	ÖSTERREICH	: 43
DANMARK	: 45	POLSKA	: 48
DEUTSCHLAND	: 49	PORTUGAL	: 351
ESPAÑA	: 34	SUISSE	: 41
GREECE	: 30	SUOMI	: 358
ITALIA	: 39	SVERIGE	: 46
MAGYARORSZÁG	: 36	OTHER WESTERN EUROPE	: - -
NEDERLAND	: 31	OTHER EASTERN EUROPE	: EE

- If you have selected a country code other than 32 (BELGIUM) or 41 (SUISSE), go to step **3**.
- If you have selected 36 (MAGYARORSZAG), 42 (CESKA REPUBLIKA), 48 (POLSKA) or EE (OTHER EASTERN EUROPE), press **OK**. Clock Set screen will appear. Set the clock manually (☞ pg. 52 – 53), then go to step **3**.

- If you have selected 32 (BELGIUM) or 41 (SUISSE), press **OK** (remote) and select the language code by pressing △▽ (remote), then go to step **3**.

(Ex.) FRANCAIS is selected for BELGIUM

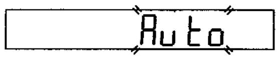


Language Code

ENGLISH	: 01	NEDERLANDS	: 06
DEUTSCH	: 02	SVENSKA	: 07
FRANCAIS	: 03	NORSK	: 08
ITALIANO	: 04	SUOMI	: 09
CASTELLANO	: 05	DANSK	: 10

3 Press **OK** (remote). "Auto" appears on the display panel.

4 Press **OK** (remote) to start Auto Set Up. Do NOT press any button on the video recorder or remote control during "Auto" is blinking.



- If "–.–:– –" appears on the display panel, see page 9 of the instructions.

* *Once you have performed Auto Set Up, even if the recorder's memory backup has expired, the recorder will not perform Auto Set Up again. Perform tuner setting (☞ pg. 44), clock setting (☞ pg. 52) as required.*

FOR MORE INFORMATION SEE INSTRUCTIONS/P6

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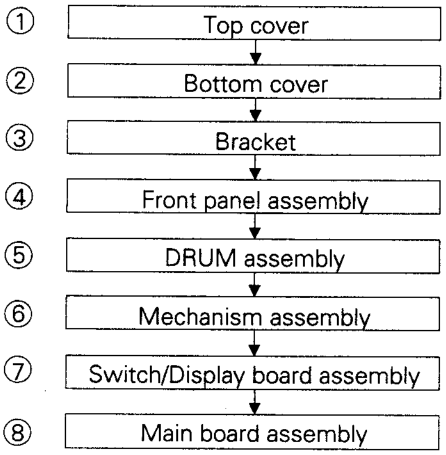
SECTION 1
DISASSEMBLY

1.1 DISASSEMBLY FLOW CHART

This flowchart lists the disassembling steps for the cabinet parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally laid.



1.2 HOW TO READ THE DISASSEMBLY AND ASSEMBLY

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2)	
②	BOTTOM COVER	D2	(S3), 7(L1)	
③	BRACKET	D3	2(S4)	
④	FRONT PANEL ASSEMBLY	D4	7(L2)	<NOTE 1>

(1) (2) (3) (4) (5)

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) NO. of parts Figures.
(2) Part name to be removed or installed.
(3) Fig.No. showing procedure or part location
(4) Identification of part to be removed,unhooked,unlocked, released,unpluged,unclamped or unsoldered. P = Spring, W = Washer, S = Screw, L = Locking tab, CNxx(WRxx) = Remove the wire (WRxx) from the connector (CNxx).

NOTE: ***The bracketed ( ) WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.***

(5) Adjustment information for installation

1.3 DISASSEMBLY/ASSEMBLY METHOD

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2)	
②	BOTTOM COVER	D2	(S3), 7(L1)	
③	BRACKET	D3	2(S4)	
④	FRONT PANEL ASSEMBLY	D4	7(L2)	<NOTE 1>
⑤	DRUM ASSEMBLY	D5	3(S5), 4(L3), (L4), (P1), CN1(WR1), CN1(WR2), INERTIA PLATE, ROLLER ARM ASSY	<NOTE 2>
⑥	MECHANISM ASSEMBLY	D6	2(S6), (S7), (S8), 2(L5), CN1(WR3)	<NOTE 2> <NOTE 3>
⑦	SWITCH/DISPLAY BOARD ASSEMBLY	D7	7(L6), (L7), CN7001(WR4), REC SAFETY BOARD ASSY	<NOTE 2> <NOTE 4>
⑧	MAIN BOARD ASSEMBLY	D8	2(S9), (L8)	

<NOTE1>
- Before attaching the Front panel assembly, ensure that the door opener ⓐ is in the lower position.

<NOTE2>
- When inserting the flat wire into the connector, be careful not to make a mistake in the positioning of its electrodes.

<NOTE3>
- When it is required to remove the screws (S6) retaining the Mechanism assembly, please refer to the "Procedures for Lowering the Cassette holder assembly"(See on pages 1-3).
- When removing the Mechanism assembly only, unhook the two spacers connecting it with the Main board assembly with pliers from the back side of the Main board assembly first, and then remove the Mechanism assembly.
- When attaching the Mechanism assembly, be careful not to damage the sensors and switches on the Main board assembly. (D3001: LED, Q3002: Start sensor, Q3003: End sensor S3002: S tape detect switch).

<NOTE4>
- The REC safety board assembly is attached to the Switch/ Display board assembly. It is therefore necessary to remove the REC safety board assembly before removing the Switch/Display board assembly.

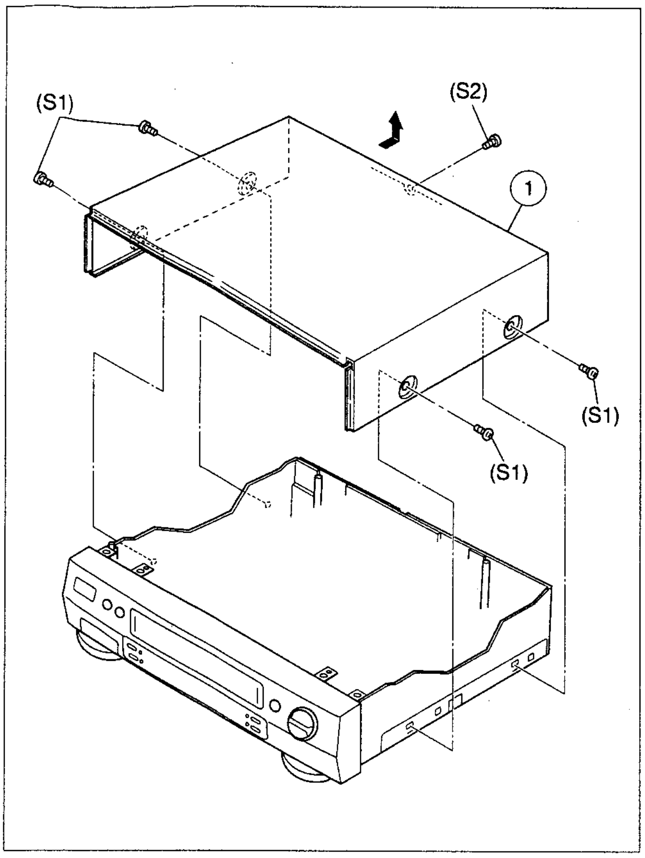


Fig. D1

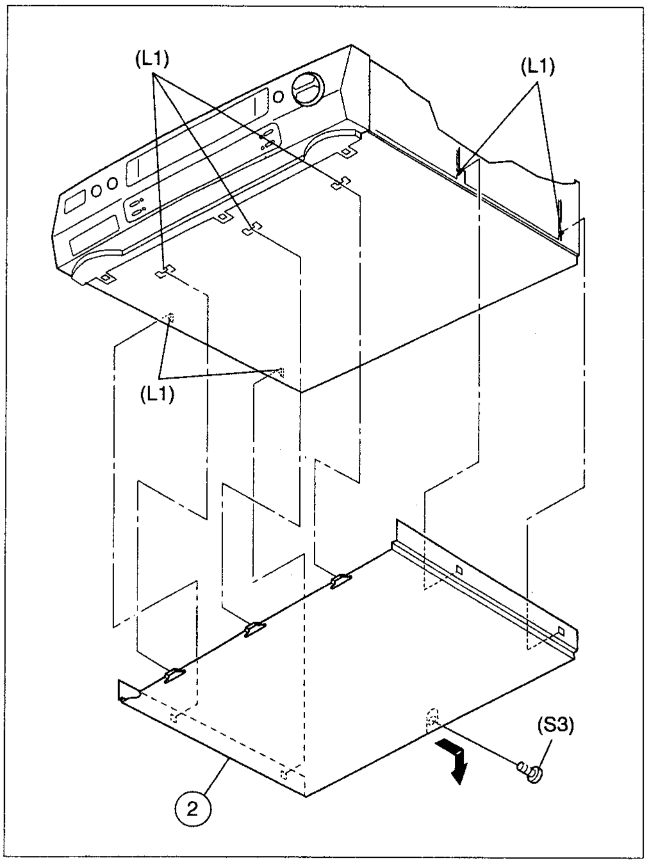


Fig. D2

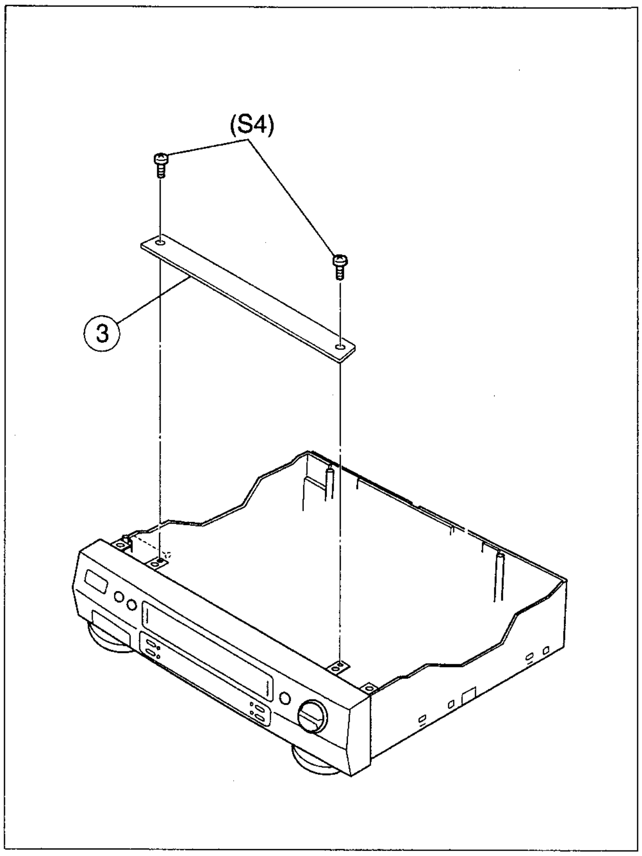


Fig. D3

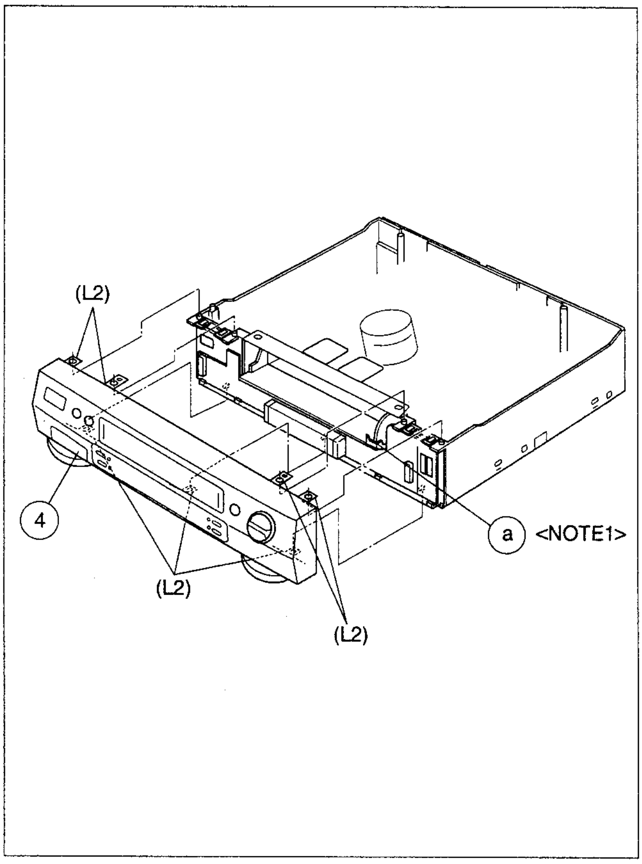


Fig. D4

NOTE : When installing the DRUM assembly, secure the screws (S5) in the order of A, B, C.

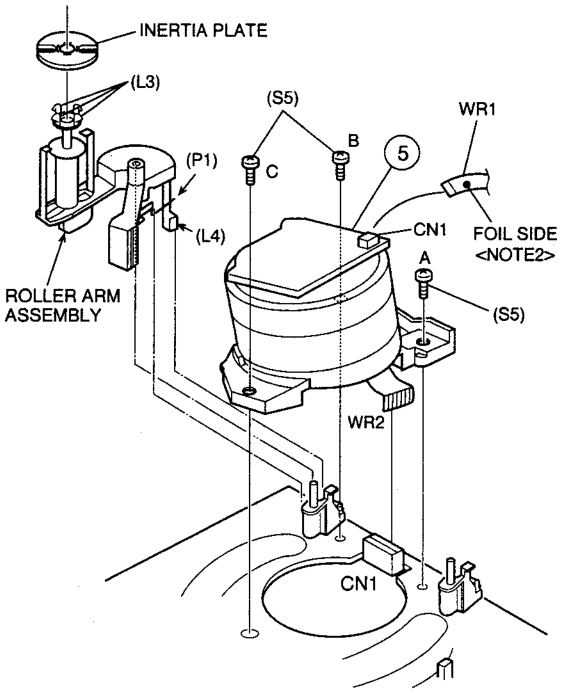

INERTIA PLATE
(L3)
(S5)
WR1
B
C
(P1)
5
(L4)
CN1
FOIL SIDE
<NOTE2>
A
ROLLER ARM
ASSEMBLY
(S5)
WR2
CN1

Fig. D5

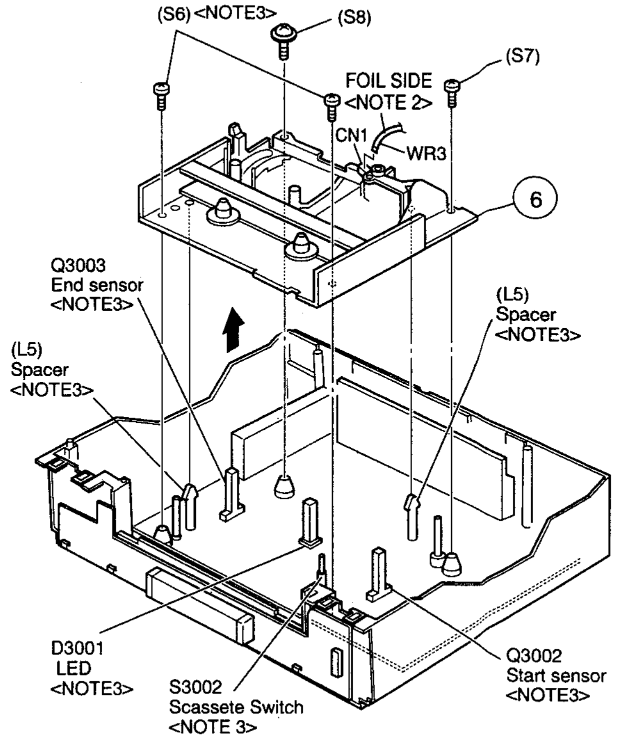

(S6) <NOTE3>
(S8)
(S7)
FOIL SIDE
<NOTE 2>
CN1
WR3
6
Q3003
End sensor
<NOTE3>
(L5)
Spacer
<NOTE3>
(L5)
Spacer
<NOTE3>
D3001
LED
<NOTE3>
S3002
Scassete Switch
<NOTE 3>
Q3002
Start sensor
<NOTE3>

Fig. D6

Procedures for Lowering the Cassette holder assembly

As the mechanism of this unit is integrated with the Housing assembly, the holder must be lowered and the two screws unscrewed when removing the Mechanism assembly.

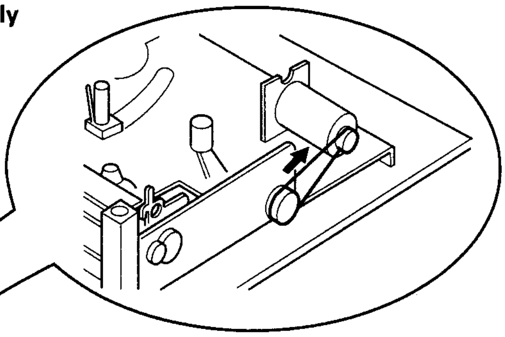


Fig. 2

Turn the loading motor pulley in the direction as indicated by Fig.2. As both Ⓐ and Ⓑ levers are lodged twice, push the levers in the direction as indicated by Fig.3 to release them. When pushing the levers, do it in the order of Ⓐ,Ⓑ,Ⓑ,Ⓐ. When the holder has been lowered, turn the pulley until the cassette holder is securely in place without allowing any up/down movement.

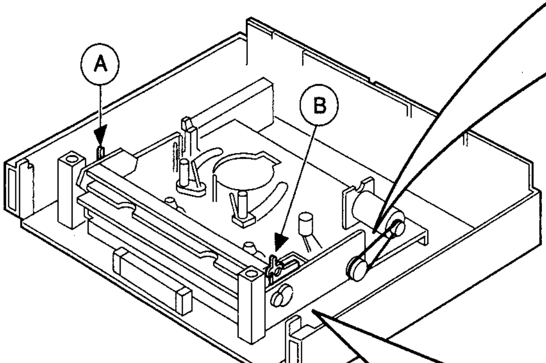


Fig. 1

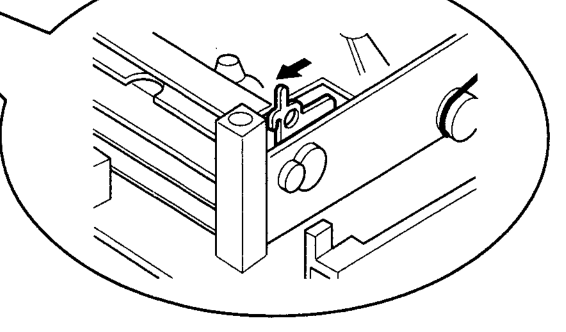


Fig. 3

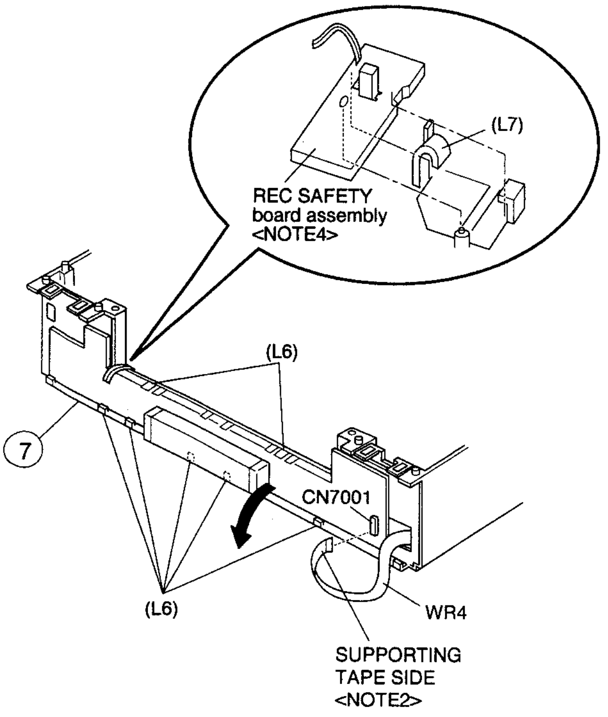

(L7)
REC SAFETY board assembly <NOTE4>
(L6)
⑦
CN7001
(L6)
WR4
SUPPORTING TAPE SIDE <NOTE2>

Fig. D7

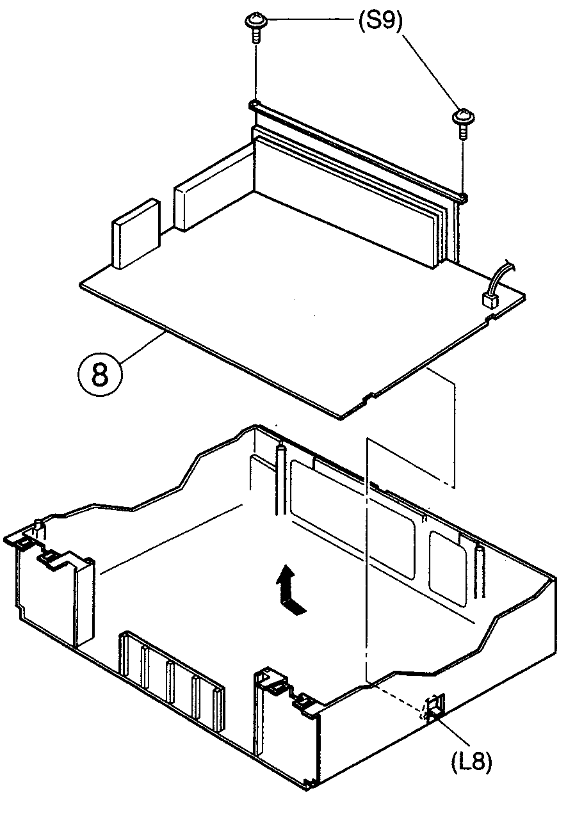


Fig. D8

1.4 SERVICE POSITION

In order to facilitate diagnosis and the repair of the Mechanism assembly, this unit is constructed so as to allow the Mechanism and Main board assemblies to be removed together from the Chassis assembly.

1.4.1 How to take out the Mechanism and Main board assemblies

(1) Remove the Top cover, Bracket, Front panel assembly. (Refer to page 1-2 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)

(2) Lower the cassette holder, and make the preparations required in order to remove the screws from the Mechanism assembly. (Refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)

(3) Take out 2 screws Ⓐ, 1 screw Ⓑ and 1 screw Ⓒ as shown in Fig. 1-4-1.

(4) Remove the flat wire from CN3011 on the Main board assembly.

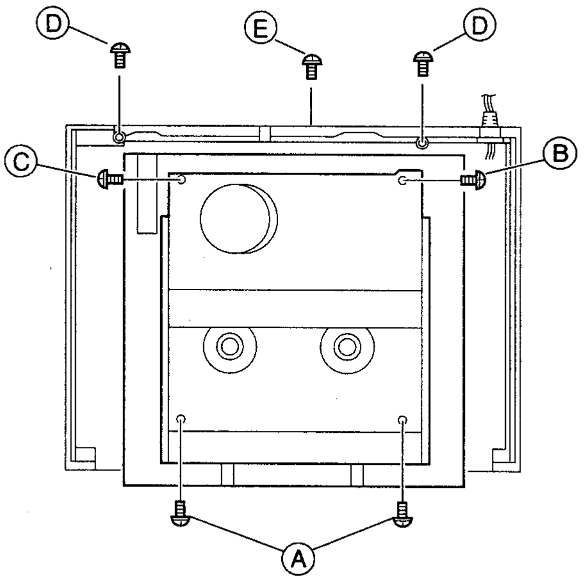


Fig. 1-4-1

(5) Take out 2 screws Ⓓ and 1 screw Ⓔ as shown in Fig. 1-4-1.

(6) Remove the hook Ⓕ while holding the edge of the Main board assembly, and remove the Main board and Mechanism assemblies together. At this stage be careful of the power cord and prongs of the jacks on the back side. (Refer to Fig. 1-4-2.)

(7) Remove the Switch/Display board assembly and REC safety board assembly. (Refer to page 1-4 of 1.3 DISASSEMBLY/ASSEMBLY METHOD. Take care not to pull the flat wire (Fig. D7) from CN7001.)

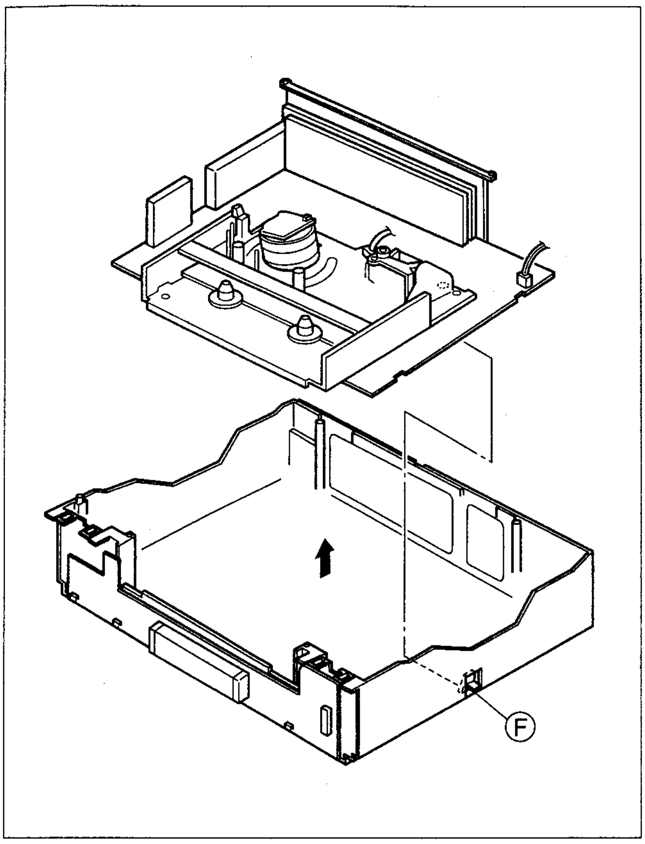


Fig. 1-4-2

(8) Place the Switch/Display board assembly, REC safety board assembly on the front side of the Mechanism and Main board assemblies which was removed at the step (6), then connect the flat wire into CN3011 of the Main board assembly. (Refer to Fig. 1-4-3.)

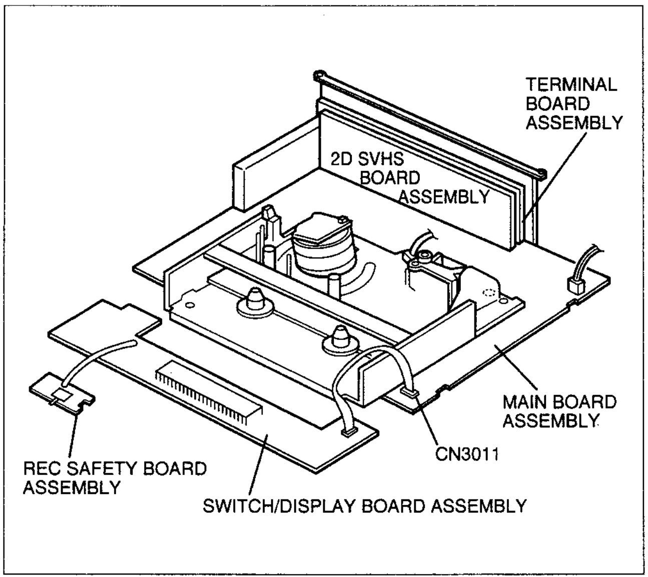


Fig. 1-4-3

(9) Connect the power cord to the wall socket, and lift the cassette holder.
(Before turning on the power make sure that there is nothing which may produce a short circuit, such as faulty soldering.)

Note: *When carrying out diagnosis and repair of the Main board assembly in the service position, be sure to ground both the Main board and the Mechanism assemblies.*

If they are improperly grounded, there may be noise on the playback picture or the FDP counter display may move even when the mechanism is kept in an inoperative status.

1.4.2 Precautions for cassette loading in the "SERVICE POSITION"

The REC safety board assembly detects cassette loading as well as cassette tabs. Therefore, after the assembly has been removed in the "SERVICE POSITION", it is required to set the switch manually on the REC safety board assembly when a cassette is loaded.

1.4.3 Cassette loading and ejection methods in the "SERVICE POSITION"(See Fig. 1-4-3).

(1) Insert a cassette halfway in the Cassette holder assembly.
(2) Set the switch on the REC safety board assembly to ON (by pressing the switch).
(3) As soon as the cassette starts to be loaded, set the switch on the REC safety board assembly to OFF (by releasing the switch).
(4) Now the desired operation (recording, playback, fast forward, rewind, etc.) is possible in this status (the status shown in Fig.1-4-3).

NOTES:
- *When performing diagnostics of the tape playback or the recording condition in the "SERVICE POSITION", enter the desired mode before turning the set upside down, and do not change the mode when performing diagnostics while the set is placed upside down. If you want to switch the mode, turn the set to the normal position (the status shown in Fig.1-4-3).*
- *In the "SERVICE POSITION", the cassette tabs cannot be detected and recording becomes possible even with a cassette with broken tabs such as the alignment tape. Be very careful not to erase important tapes.*

(5) The switch on the REC safety board assembly does not have to be operated when ejecting a tape. But be sure to turn the set to the normal position before ejecting the tape.

1.5 MECHANISM SERVICE MODE

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the "MECHANISM SERVICE MODE".

1.5.1 How to set the "MECHANISM SERVICE MODE"

(1) Disconnect VCR from AC.
(2) Connect TPGND and TP7001 (TEST) on the Switch/Display board assembly with a jump wire.
(3) Connect VCR to AC.
(4) Press the POWER button.
(5) With lock levers ⒶⒷ on the left and right of the Cassette holder assembly pulled toward the front, slide the holder in the same direction as the cassette insertion direction. (For the positions of lock levers ⒶⒷ, refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
(6) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.

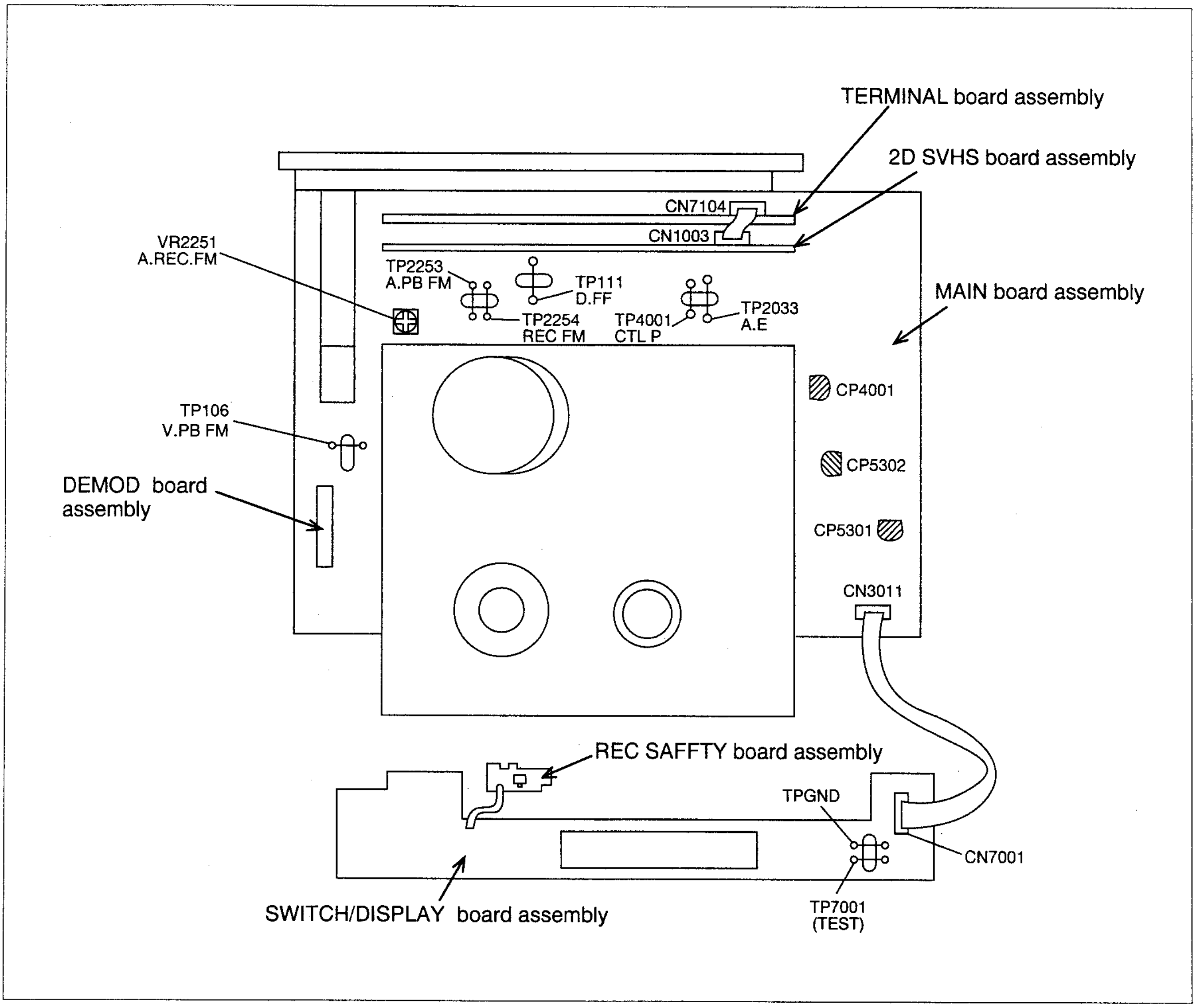

TERMINAL board assembly
2D SVHS board assembly
CN7104
CN1003
VR2251
A.REC.FM
TP2253
A.PB FM
TP111
D.FF
TP2254
REC FM
TP4001
CTL P
TP2033
A.E
MAIN board assembly
CP4001
CP5302
CP5301
TP106
V.PB FM
DEMOD board assembly
CN3011
REC SAFFTY board assembly
TPGND
CN7001
SWITCH/DISPLAY board assembly
TP7001
(TEST)

Fig. 1-5-1

1.6 EMERGENCY DISPLAY FUNCTION

This product has the function to store the last two previous emergency faults which can be displayed in the FDP when servicing.

1.6.1 How to display record of an emergency faults

Note: *Put the unit into A mode by using the VCR remote controller. (When it is in B mode, the preset remote control codes are not accepted.)*

(1) Press the "N" button of the presetting unit and the two previous emergency faults are shown in the FDP.
(2) Press the "N" button of the presetting unit again to return to the normal mode.

[Example] E : 01 : 03
03 — Emergency fault before last
01 — Emergency fault of the last time

[Example] E : — — : — — ← No record of emergency

1.6.2 Detail of emergency faults

EMG DATA	Symptom	Detect mode	Resulting mode
E : 01	Loading motor rotates for more than 8 Sec without shift to next mode.	Loading	POWER OFF
E : 02	Loading motor rotates for more than 8 Sec without shift to next mode.	Unloading	POWER OFF
E : 03	TU REEL FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	POWER OFF
E : 04	DRUM FF input is absent. (for more than 3 Sec)	REC/PLAY SEARCH FF/SEARCH REW	POWER OFF
E : 06	CAPSTAN FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	POWER OFF
E : 07	No SWD5V/12V	POWER ON	POWER OFF

Table 1-6-1 EMERGENCY FAULTS

1.6.3 How to clear emergency record

Press the COUNTER RESET button on the remote controller in the emergency record display mode, and the record of the emergency fault(s) is cleared.

1.7 SYSCON CIRCUIT

1.7.1 Syscon CPU pin function (IC3001) 1/2

PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBIAS	-	CTL BIAS VOLTAGE
5	CTLFB	IN	CTL PULSE FEEDBACK
6	CTLAMPOUT	OUT	CTL PULSE OUTPUT
7	CTLSMTIN	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	SVHS MODE:H
12	SECAM DET/KILLER OUT	-	NC
13	VIDEO ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
14	START SENSOR	IN	START SENSOR
15	END SENSOR	IN	END SENSOR
16	IND(L)	-	NC
17	DD ABS	-	NC
18	SCR ID	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE:H)
19	IND(R)	-	NC
20	BS ANT/AFC	IN	TUNING CLOCK
21	LED/RF AGC	IN	NC/CHANGES IN ATS+IC OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT.
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV.INPUT/NON HiFi MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP REV(L)	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD:H/REV:L)
29	RC	IN	REMOTE CONTROL DATA INPUT
30	R.PAUSE/COMPU IN	-	NC
31	P50 IN	IN	CONTROL SIGNAL FOR TV LINK
32	LMC3	OUT	LOADING MOTOR DRIVE(3)
33	P50 OUT/COMPU OUT	OUT	CONTROL SIGNAL FOR TV LINK
34	EE(L)	OUT	EE/PB CONTROL (EE MODE:L)
35	LMC1	OUT	LOADING MOTOR DRIVE(1)
36	LMC2	OUT	LOADING MOTOR DRIVE(2)
37	P.CTL(H)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
38	SB G(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	STB/TEST	OUT	STROBE SIGNAL (FOR FDP DRIVER)
40	POWER DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	REC SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
42	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
43	VSS	-	GND
44	TRICK(H)	-	NC
45	VCC	-	SYSTEM POWER
46	N.REC(H)	OUT	NORMAL AUDIO REC MODE CONTROL (REC:H)
47	3.58NTSC	-	NC
48	SUB CLK	-	NC
49	I2C DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE ON-SCREEN IC
50	I2C CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR THE ON-SCREEN IC
51	S.DATA TOSYS	IN	SERIAL DATA TRANSFER OUTPUT FROM THE ON-SCREEN IC TO THE FDP DRIVER
52	S.DATA FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	LOCK(L)	IN	TUNING PLL LOCK DETECT: L

Table 1-7-1 SYSCON CPU pin function(1/2)

1.7.2 Syscon CPU pin function (IC3001) 2/2

PIN NO.	LABEL	IN/OUT	FUNCTION
57	TU CE	OUT	CHIP ENABLE OF THE TUNER UNIT
58	JUST CLK/CCIR(H)	OUT	NC/EXCEPT FOR NTSC:L
59	SW1	OUT	TUNER "L" SYSTEM MODE:H
60	TU CLK	OUT	CLOCK FOR DATA TRANSFER TO THE TUNER UNIT
61	TU DATA	OUT	TUNING DATA
62	FWE	-	NC
63	NMI(L)	-	NC
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES(L)	-	RESET TERMINAL (RESETON:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC	-	SYSTEM POWER
71	MODE	-	NC
72	TU A MUTE(H)	OUT	TUNER AUDIO MUTE CONTROL (MUTE:H)
73	TU V MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	SW2	OUT	TUNER SYSTEM "L" MODE:L
78	FULL E ON(H)	-	NC
79	CNR ON(H)	OUT	CNR ON SIGNAL (ON:H)
80	V.P.CTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	ET REC(H)	-	NC
82	VCC	-	SYSTEM POWER
83	PAL/NTSC(L)	OUT	NTSC:L
84	VSS	-	GND
85	SP SHORT(H)	OUT	MODE SELECT
86	LP SHORT(H)	OUT	MODE SELECT
87	SP(H)/S PB(H)	-	NC
88	A.REC ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	SECAM(H)	-	NC
90	HEAD SEL	-	NC
91	OSD CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
92	SYNC DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL (DETECTED:H)
93	P.MUTE(L)	OUT	PICTURE MUTE CONTROL (MUTE:L)
94	JSB/STLB	-	NC
95	SHTL(L)/JOGA	-	NC
96	THROUGH(H)	-	NC
97	JSA/STLA	-	NC
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	SUB RESET/V.UP(H)	-	NC
104	S.CASS(H)	IN	DETECTION SIGNAL FOR SVHS CASSETTE (SVHS:H)
105	PERI 1S	IN	INPUT FOR THE TERMINAL SLIDE SW POSI IN THE SAT MODE
106	LOCK(L)/P.SAVE(L)	OUT	NC/POWER SAVE:L
107	DPG	IN	DRUM PICKUP PULSE INPUT (SWITCHING PULSE)
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

Table 1-7-2 SYSCON CPU pin function(2/2)

SECTION 2
MECHANISM ADJUSTMENT

2.1 BEFORE STARTING REPAIR AND ADJUSTMENT

2.1.1 Precautions

(1) Unplug the power cable of the main unit before using your soldering iron.
(2) Take care not to cause any damage to the conductor wires when plugging and unplugging the connectors.
(3) Do not randomly handle the parts without identifying where the trouble is.
(4) Exercise enough care not to damage the lugs, etc. during the repair work.
(5) When installing the front panel assembly, be sure to hook the lug on the back side of the cassette door to the door opener of the cassette holder. If this operation is neglected it will not be possible to remove the cassette when ejecting because the housing door cannot be opened.

2.1.2 Checking for Proper Mechanical Operations

Enter the mechanism service mode when you want to operate the mechanism when no cassette is loaded. (See 1.5 MECHANISM SERVICE MODE.)

2.1.3 Manually Removing the Cassette Tape

1. In case of electrical failures

If you cannot remove the cassette tape which is loaded because of any electrical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, bracket and front panel assembly. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
(2) Unload the cassette by manually turning the loading motor of the mechanism assembly toward the front. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig.2-1-1.)
(3) Bring the pole base assembly (supply or take-up side) to a pause when it reaches the position where it is hidden behind the cassette tape.
(4) Move the top guide toward the drum while holding down the lug Ⓐ of the bracket retaining the top guide. Likewise hold part Ⓑ down and remove the top guide. Section Ⓒ of the top guide is then brought under the cassette lid. Then remove the top guide by pressing the whole cassette tape down. (See Fig.2-1-2.)
(5) Remove the cassette tape by holding both the slackened tape and the cassette lid.
(6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

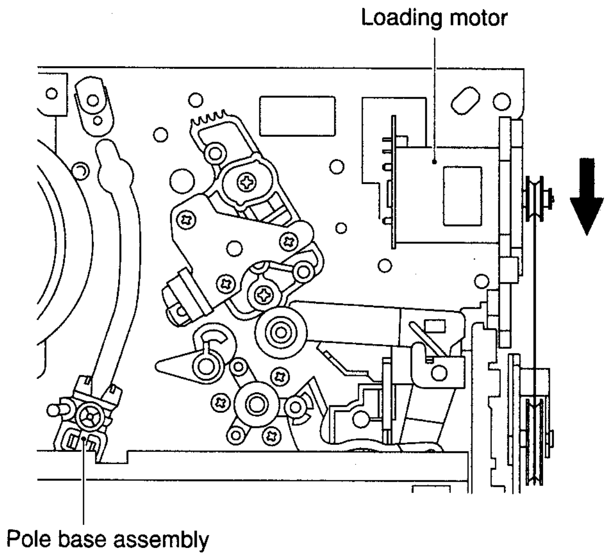


Fig. 2-1-1

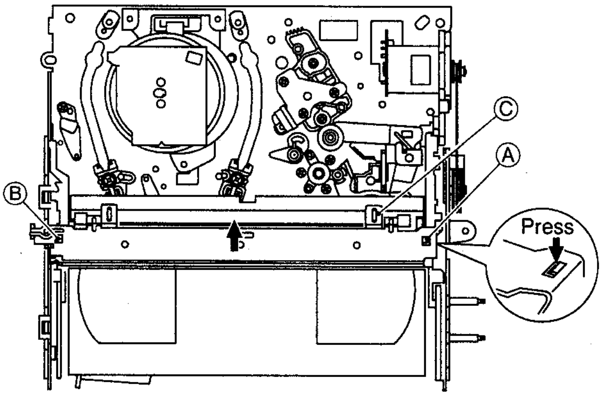


Fig. 2-1-2

2. In case of mechanical failure

If you cannot remove the cassette tape which is loaded because of any mechanical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, front panel assembly and others so that the mechanism assembly is visible. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)

(2) While keeping the tension arm assembly of the mechanism assembly free from tension, pull the tape on the pole base assembly (supply or take-up side) out of the guide roller. (See Fig.2-1-3.)

(3) Take the spring of the pinch roller arm assembly off the hook of the press lever assembly, and detach it from the tape. (See Fig.2-1-4.)

(4) In the same way as in the electrical failure instructions in 2.1.3 (4), remove the top guide.

(5) Raise the cassette tape cover. By keeping it in that position, draw out the cassette tape case from the cassette holder and take out the tape.

(6) By hanging the pinch roller arm assembly spring back on the hook, take up the slack of the tape into the cassette.

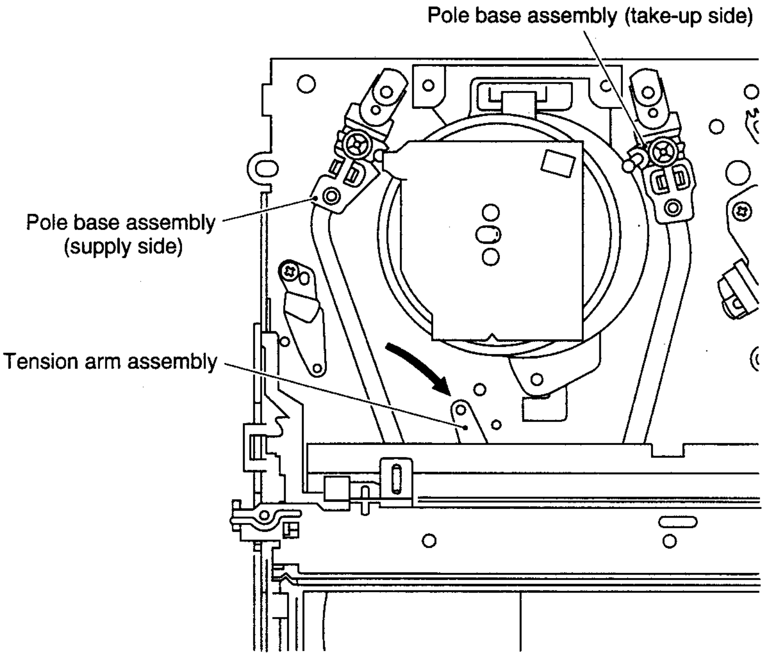

Pole base assembly (take-up side)
Pole base assembly (supply side)
Tension arm assembly

Fig. 2-1-3

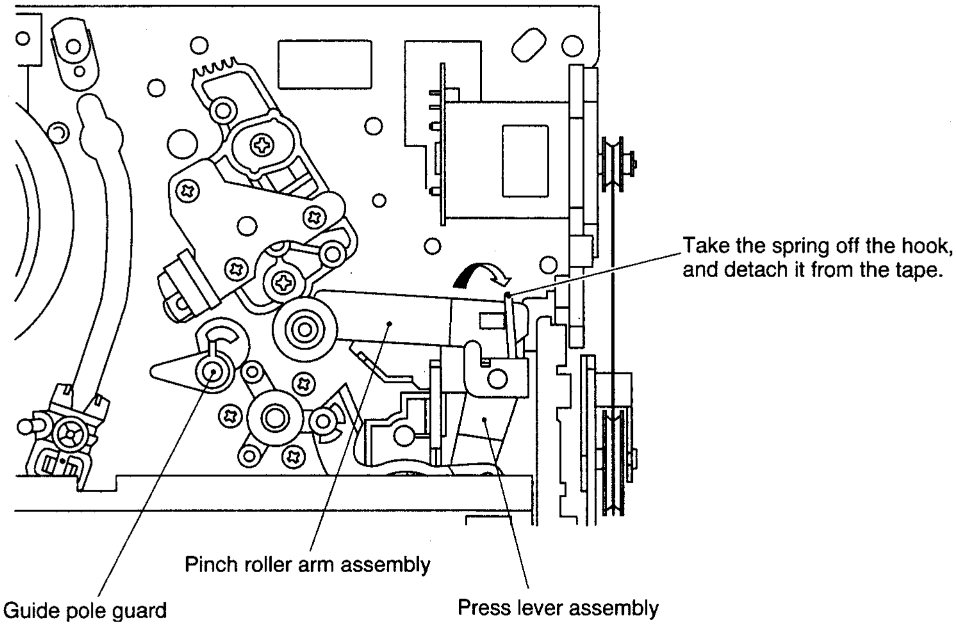

Take the spring off the hook, and detach it from the tape.
Pinch roller arm assembly
Guide pole guard
Press lever assembly

Fig. 2-1-4

2.1.4 Jigs and Tools Required for Adjustment

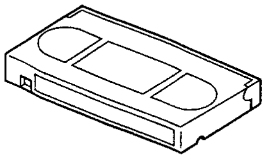
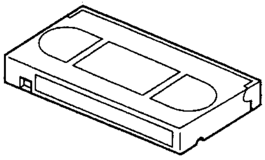
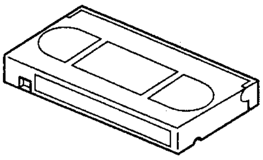
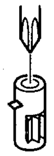
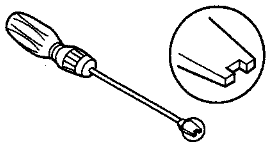
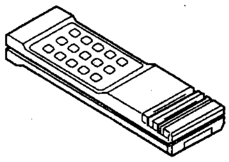
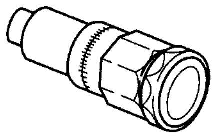
Alignment tape (SP) MHPE	Alignment tape (LP) MHPE-L	Back tension cassette gauge PUJ48076-2	A/C head position bit PTU94010
			
Roller driver PTU94002	Presetting unit PTU94008	Torque gauge PUJ48075-2	
			

Table 2-1-1 Jigs and tools required for adjustment

2.1.5 Maintenance and Inspection

1. Location of major mechanical parts

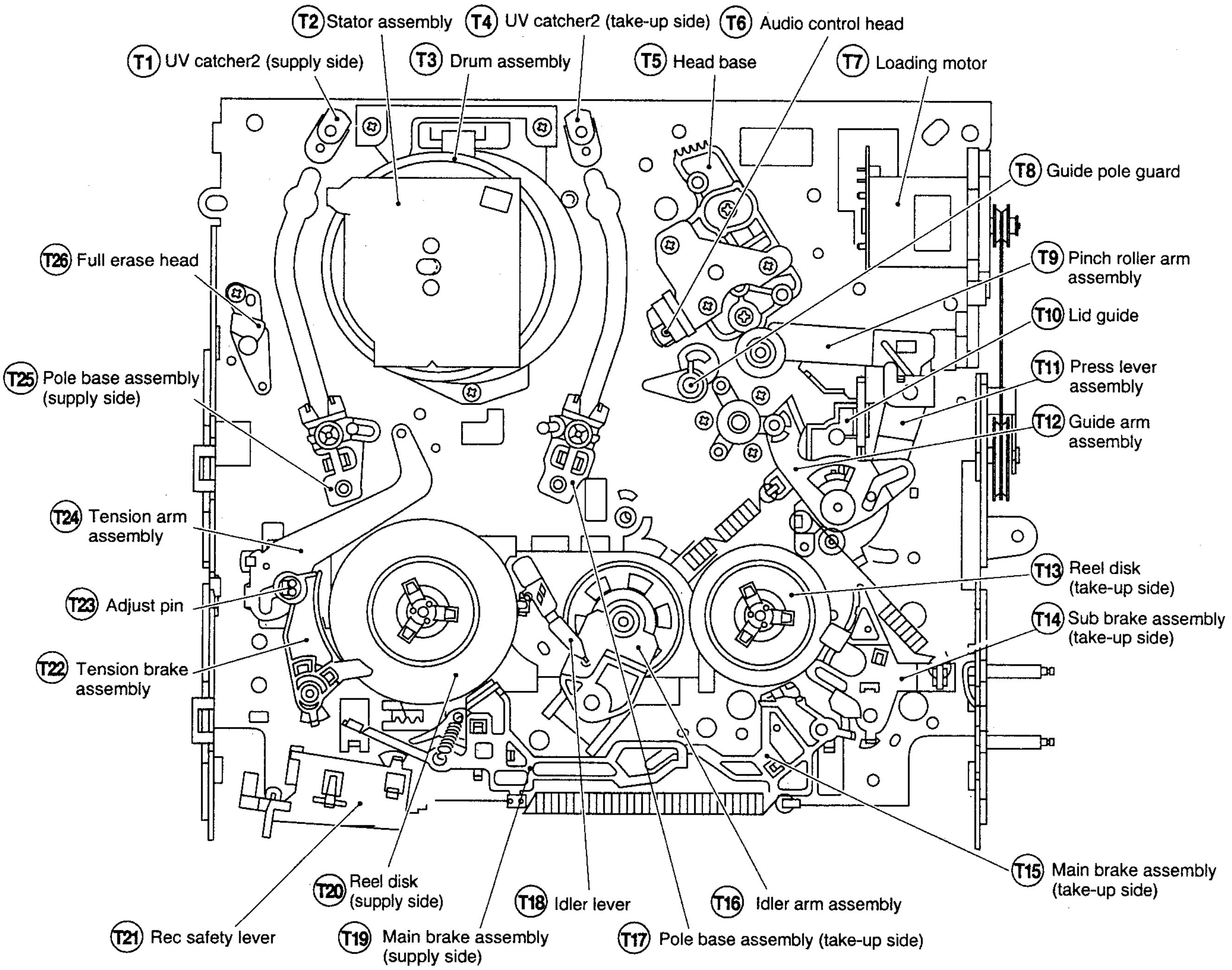

T2 Stator assembly
T4 UV catcher2 (take-up side)
T6 Audio control head
T1 UV catcher2 (supply side)
T3 Drum assembly
T5 Head base
T7 Loading motor
T8 Guide pole guard
T26 Full erase head
T9 Pinch roller arm assembly
T10 Lid guide
T25 Pole base assembly (supply side)
T11 Press lever assembly
T12 Guide arm assembly
T24 Tension arm assembly
T13 Reel disk (take-up side)
T23 Adjust pin
T14 Sub brake assembly (take-up side)
T22 Tension brake assembly
T15 Main brake assembly (take-up side)
T20 Reel disk (supply side)
T18 Idler lever
T16 Idler arm assembly
T21 Rec safety lever
T19 Main brake assembly (supply side)
T17 Pole base assembly (take-up side)

Fig. 2-1-5 Mechanism assembly top side

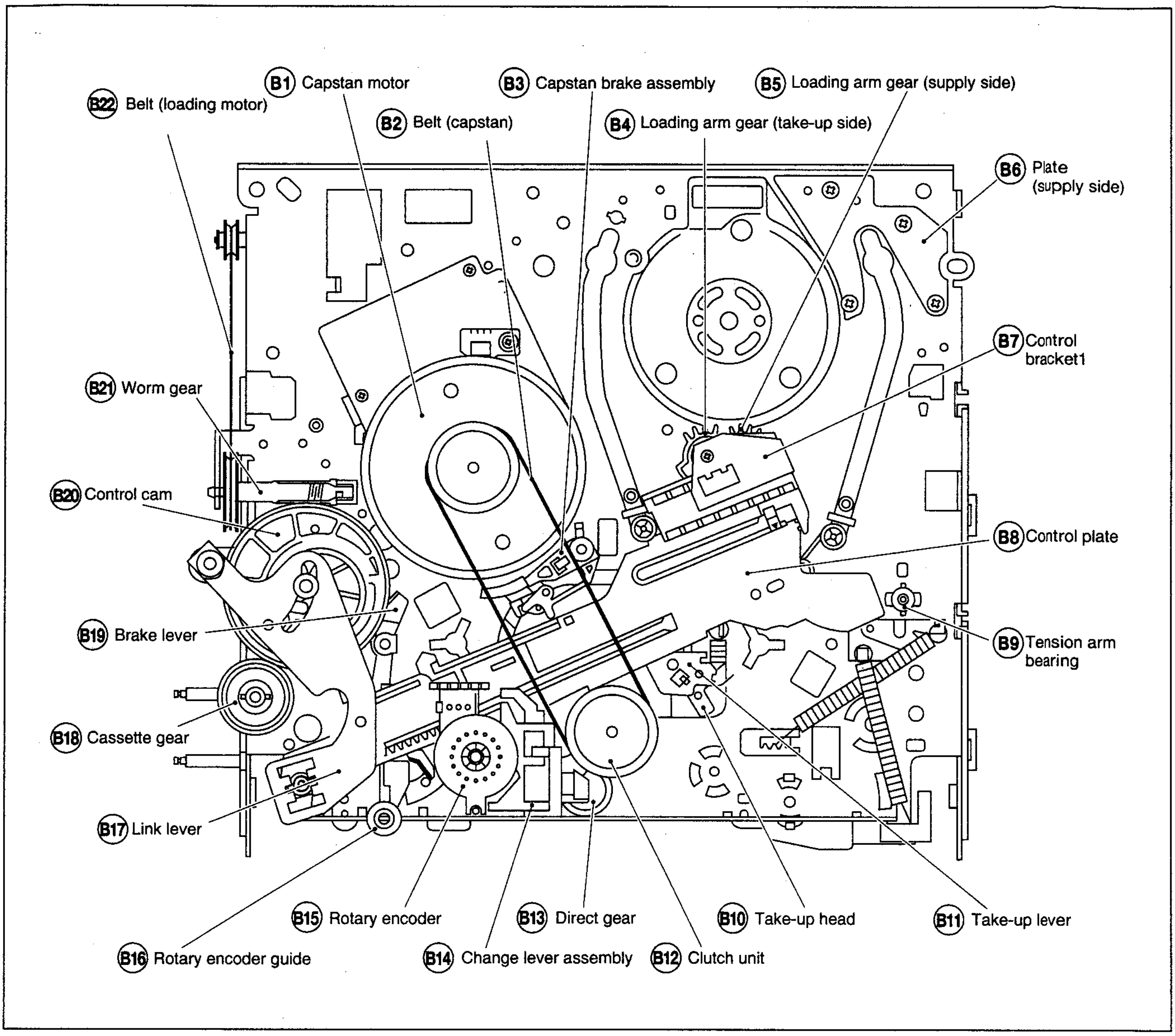

B22 Belt (loading motor)
B1 Capstan motor
B2 Belt (capstan)
B3 Capstan brake assembly
B4 Loading arm gear (take-up side)
B5 Loading arm gear (supply side)
B6 Plate (supply side)
B7 Control bracket1
B21 Worm gear
B20 Control cam
B8 Control plate
B19 Brake lever
B9 Tension arm bearing
B18 Cassette gear
B17 Link lever
B15 Rotary encoder
B13 Direct gear
B10 Take-up head
B11 Take-up lever
B16 Rotary encoder guide
B14 Change lever assembly
B12 Clutch unit

Fig. 2-1-6 Mechanism assembly bottom side

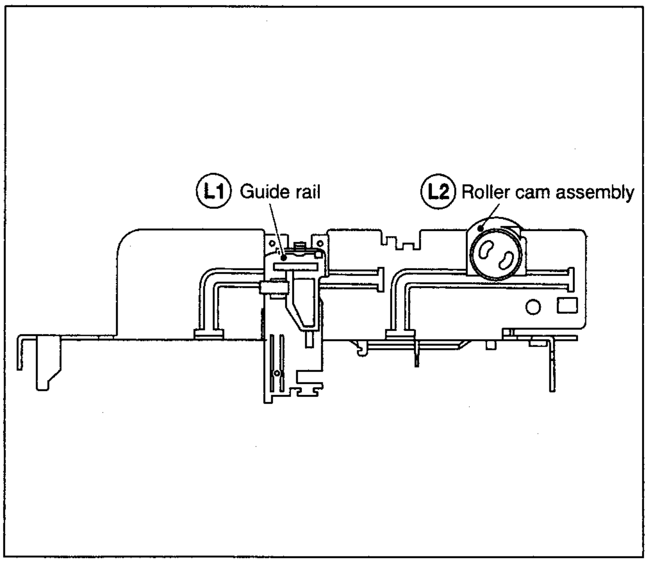

L1 Guide rail
L2 Roller cam assembly

Fig. 2-1-7 Mechanism assembly left side

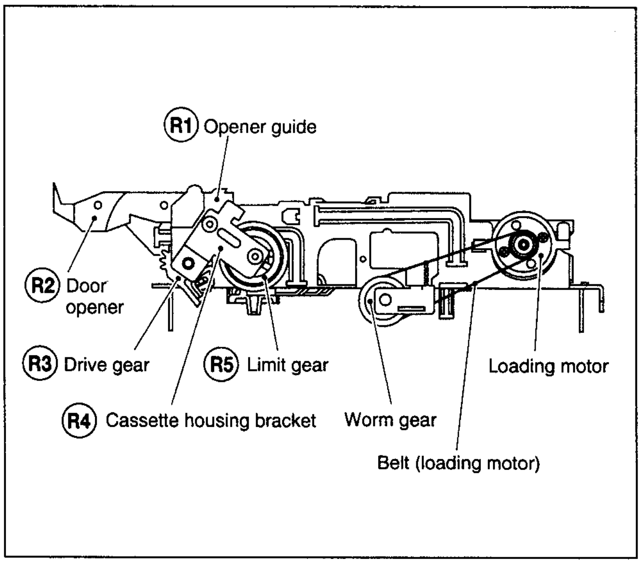

R1 Opener guide
R2 Door opener
R3 Drive gear
R5 Limit gear
Loading motor
R4 Cassette housing bracket
Worm gear
Belt (loading motor)

Fig. 2-1-8 Mechanism assembly right side

Note: *This table shows the order in which parts are removed for replacement. To replace parts, remove them in the order of 1 to 18 as shown in the table. To install them, reverse the removal sequence.*
The circled numbers (symbols and numbers) preceding the individual part names represent the numbers in the "Location of major mechanical parts" table. Also, the "T", "B", and "T/B" on the right of each part name shows that the particular part is removed from the front, from the back, and from both sides of the mechanism, respectively.

	Symbols and numbers			L1	L2	R4	R1	–	–	R3	–	T9	T12	T11	T1T4	B15	B12	B14	B13	B17	B21	B7	B8	B5	B4	B11	T14	T15	T13	T22	T24	T18	B19
Symbols and numbers	Removal parts (Reference items) Replacement parts	Front (T)/Back (B) of mechanism	Number of removal steps	Guide rail	Roller cam assembly	Cassette housing bracket	Opener guide	Relay gear	Cassette holder assembly	Drive gear	Drive arm	Pinch roller arm assembly	Guide arm assembly	Press lever assembly	UV catcher2	Rotary encoder	Clutch unit	Change lever assembly	Direct gear	Link lever	Worm gear	Control bracket1	Control plate	Loading arm gear (supply side)	Loading arm gear (take-up side)	Take-up lever	Sub brake assembly (take-up side)	Main brake assembly (take-up side)	Reel disk (take-up side)	Tension brake assembly	Tension arm assembly	Idler lever	Brake lever
L1	2.2.3 Guide rail	T	1																														
L2	2.2.3 Roller cam assembly	T	1																														
R4	2.2.3 Cassette housing bracket	T	1																														
R1	2.2.3 Opener guide	T	2			1																											
R2	2.2.3 Door opener	T	3			1	2																										
–	2.2.3 Relay gear	T	3			1	2																										
R5	2.2.3 Limit gear	T	3			1	2																										
–	2.2.3 Cassette holder assembly	T	6	1	2	3	4	5																									
R3	2.2.3 Drive gear	T	4			1	2	3																									
–	2.2.3 Drive arm	T	8	1	2	3	4	5	6	7																							
T9	2.2.4 Pinch roller arm assembly	T	1																														
T12	2.2.5 Guide arm assembly	T	1																														
T11	2.2.5 Press lever assembly	T	3									1	2																				
T6	2.2.6 Audio control head	T	1																														
T7	2.2.7 Loading motor	T	1																														
B1	2.2.8 Capstan motor	T/B	1																														
T1T4	2.2.9 UV catcher2	T	1																														
T17	2.2.9 Pole base assembly (take-up side)	T/B	2												1																		
T25	2.2.9 Pole base assembly (supply side)	T/B	2												1																		
B15	2.2.10 Rotary encoder	B	1																														
B12	2.2.11 Clutch unit	B	1																														
B14	2.2.12 Change lever assembly	B	3													1	2																
B13	2.2.12 Direct gear	B	4													1	2	3															
–	2.2.12 Clutch gear1	B	5													1	2	3	4														
B17	2.2.13 Link lever	B	1																														
B18	2.2.14 Cassette gear	B	2																	1													
B20	2.2.14 Control cam	B	2																	1													
B21	2.2.14 Worm gear	B	1																														
T10	- Lid guide	T/B	5									1	2	3							4												
B7	2.2.15 Control bracket1	B	1																														
B8	2.2.15 Control plate	B	6													1	2	3		4		5											
B5	2.2.16 Loading arm gear (supply side)	B	7													1	2	3		4		5	6										
B4	2.2.16 Loading arm gear (take-up side)	B	8													1	2	3		4		5	6	7									
–	2.2.16 Loading arm gear shaft	B	9													1	2	3		4		5	6	7	8								
B11	2.2.17 Take-up lever	T/B	7													1	2	3		4		5	6										
B10	2.2.17 Take-up head	T/B	8													1	2	3		4		5	6			7							
–	2.2.17 Control plate guide	T/B	8													1	2	3		4		5	6			7							
B3	2.2.18 Capstan brake assembly	T/B	7													1	2	3		4		5	6										
T14	2.2.19 Sub brake assembly(take-up side)	T/B	15	1	2	3	4	5	6	7	8					9	10	11		12		13	14										
T15	2.2.20 Main brake assembly(take-up side)	T/B	16	1	2	3	4	5	6	7	8					9	10	11		12		13	14				15						
T19	2.2.20 Main brake assembly(supply side)	T/B	9	1	2	3	4	5	6	7	8																						
T13	2.2.20 Reel disk (take-up side)	T/B	16	1	2	3	4	5	6	7	8					9	10	11		12		13	14				15						
T22	2.2.21 Tension brake assembly	T/B	9	1	2	3	4	5	6	7	8																						
T20	2.2.21 Reel disk (supply side)	T/B	10	1	2	3	4	5	6	7	8																			9			
T24	2.2.21 Tension arm assembly	T/B	10	1	2	3	4	5	6	7	8																			9			
B9	2.2.21 Tension arm bearing	T/B	10	1	2	3	4	5	6	7	8																			9			
T18	2.2.22 Idler lever	T/B	17	1	2	3	4	5	6	7	8					9	10	11		12		13	14							15	16		
T16	2.2.22 Idler arm assembly	T/B	18	1	2	3	4	5	6	7	8					9	10	11		12		13	14							15	16	17	
B19	- Brake lever	T/B	18	1	2	3	4	5	6	7	8					9	10	11		12		13	14				15	16	17				
B16	- Rotary encoder guide	T/B	19	1	2	3	4	5	6	7	8					9	10	11		12		13	14				15	16	17				18

2. Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.
When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

(1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth or Kimu-wipe with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.

Note: ***Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.***

(2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.
(3) After cleaning, make sure that the cleaned parts are completely dry before using the video tape.

3. Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

(1) See the mechanism assembly and disassembly diagrams (M4) for the lubricating or greasing spots. See Table 2-1-2 for the types of oil or grease to be used.

Type	Name	Serial No.	Symbols on the disassembly diagrams
Grease	Maltemp SH-P	KYODO-SH-P	AA
Oil	Cosmohydro HV56	COSMO-HV56	BB

Table 2-1-2 Grease and oil used for the unit

4. Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning,lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions.However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time,even if the set is not used.

System	Parts Name	Operation Hours	
		~1000H	~2000H
Tape transport	Upper drum assembly	★○	○
	A/C head	★○	★○
	Lower drum assembly	★	★○
	Pinch roller arm assembly	★	★
	Full erase head	★	★
	Tension arm assembly	★	★
	Capstan motor (Shaft)	★	★
	Guide arm assembly	★	★
Drive	Capstan motor		○
	Capstan brake assembly		○
	Main brake assembly		○
	Belt (Capstan)	○	○
	Belt (Loading motor)		○
	Loading motor		○
	Clutch unit		○
	Worm gear		○
	Control plate		○
Other	Brush	★○	★○
	Tension brake assembly	○	○
	Rotary encoder		○

★: Cleaning
○: Inspection or Replacement if necessary

Table 2-1-3

2.2 REPLACEMENT OF MAJOR PARTS

2.2.1 Before Starting Disassembling (Phase matching between mechanical parts)

The mechanism of this unit is closely linked with the rotary encoder and system controller circuits.
Since the system controller detects the status of mechanical operation in response to phases of the rotary encoder (internal switch positions), the mechanism may not operate properly unless such parts as the rotary encoder, control plate, loading arm gear, control cam, cassette gear, limit gear, relay gear and drive gear are installed in their correct positions.
Especially, this model is not provided with any cassette housing assembly, so that cassette loading and unloading must be accomplished by operation of the cassette holder assembly. The latter is in turn driven by such parts as the drive gear, relay gear and limit gear. Exercise enough care, therefore, to have the phases of all this gear matching one another.
(For information on phase matching of the mechanism, see the instructions on how to install individual parts.)

This unit is provided with a mechanism assembly mode. It is therefore necessary to enter this mode for assembling and disassembling procedures.
This mode is usually not in use, manually set it when it is required.

2.2.2 How to Set the Mechanism Assembling Mode

Remove the mechanism assembly and place it bottom side up. (See SECTION 1 DISASSEMBLY.) Turn the worm gear toward the front so that the guide hole of the control cam is brought into alignment with the hole at the mechanism assembly chassis. This position renders the mechanism assembling mode operational. Make sure that the control plate is located in alignment with the mark E. (See Fig.2-2-1.)

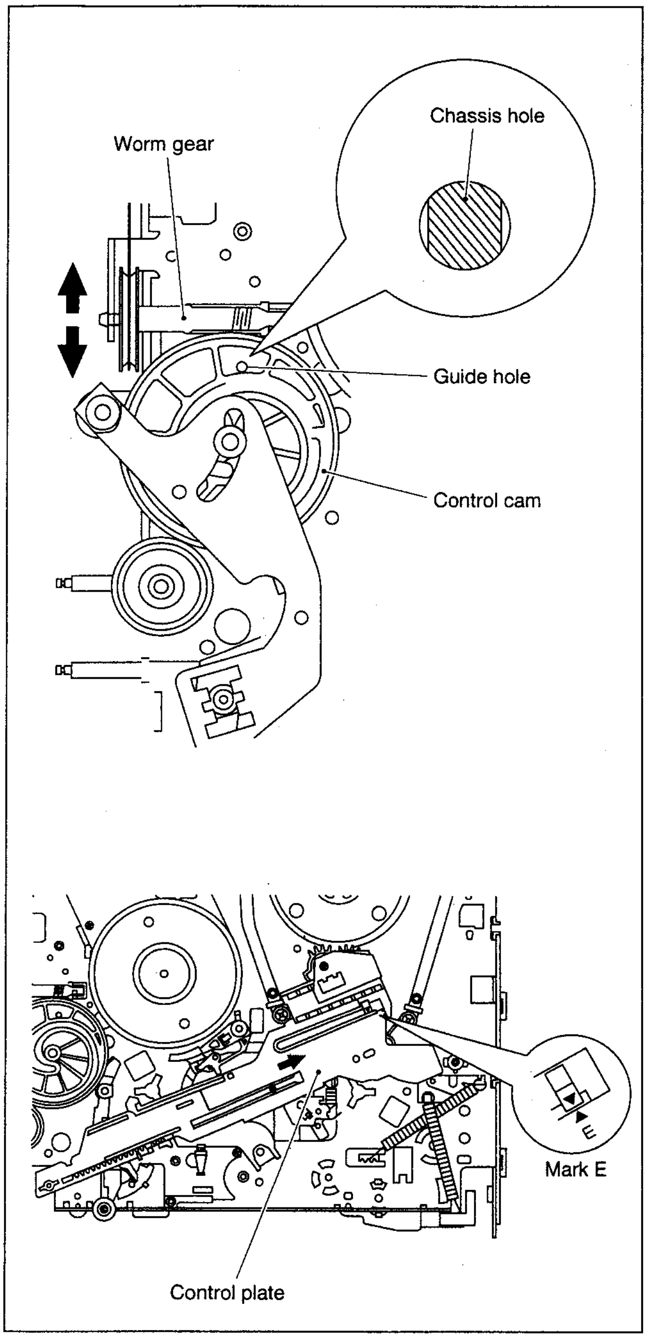

Chassis hole
Worm gear
Guide hole
Control cam
E
Mark E
Control plate

Fig. 2-2-1

2.2.3 Cassette Holder Assembly

1. How to remove

(1) Remove the guide rail and roller cam assembly. (See Fig.2-2-2.)
(3 lugs on the guide rail and one lug on the roller cam assembly)

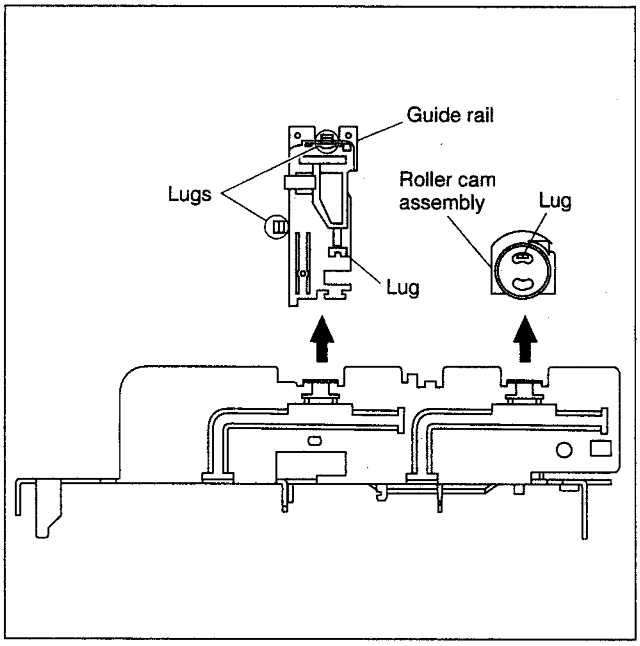

Guide rail
Lugs
Roller cam assembly
Lug
Lug

Fig. 2-2-2

(2) Remove the two slit washers and remove the cassette housing bracket. (See Fig.2-2-3.)
(3) Remove the opener guide, spring(A), door opener, relay gear and limit gear. (See Fig.2-2-3.)

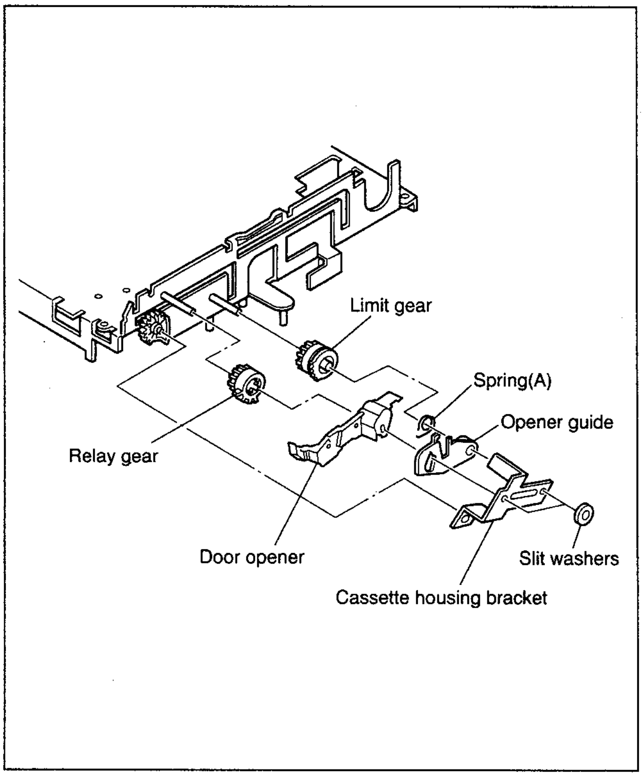

Limit gear
Spring(A)
Opener guide
Relay gear
Door opener
Slit washers
Cassette housing bracket

Fig. 2-2-3

(4) While swinging the lock levers (R) and (L) of the cassette holder assembly toward the front, slide the cassette holder assembly until its legs come to where the guide rail and the roller cam assembly have been removed (so that the drive arm is upright). (See Fig.2-2-4.)

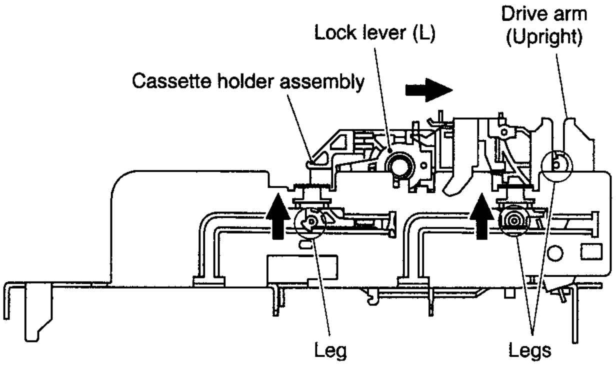

Drive arm
(Upright)
Lock lever (L)
Cassette holder assembly
Leg
Legs

Fig. 2-2-4

(5) While holding the left side of the cassette holder, lift the cassette holder assembly so that the three legs on the left side are all released. Then pull the legs Ⓐ and Ⓑ on the right side out of the rail and also pull up the leg Ⓒ. (See Fig.2-2-5 and Fig.2-2-6.)

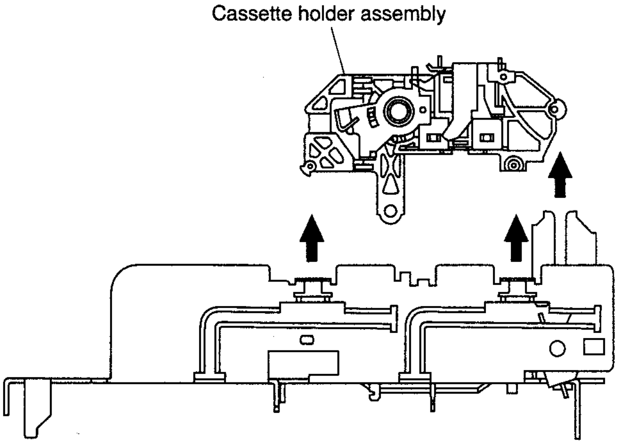

Cassette holder assembly

Fig. 2-2-5

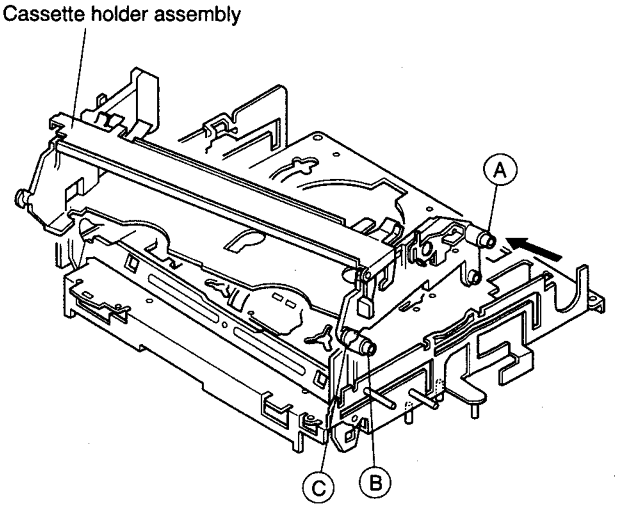

Cassette holder assembly
Ⓐ
Ⓒ
Ⓑ

Fig. 2-2-6

(6) Draw out the drive gear, and remove the drive arm.

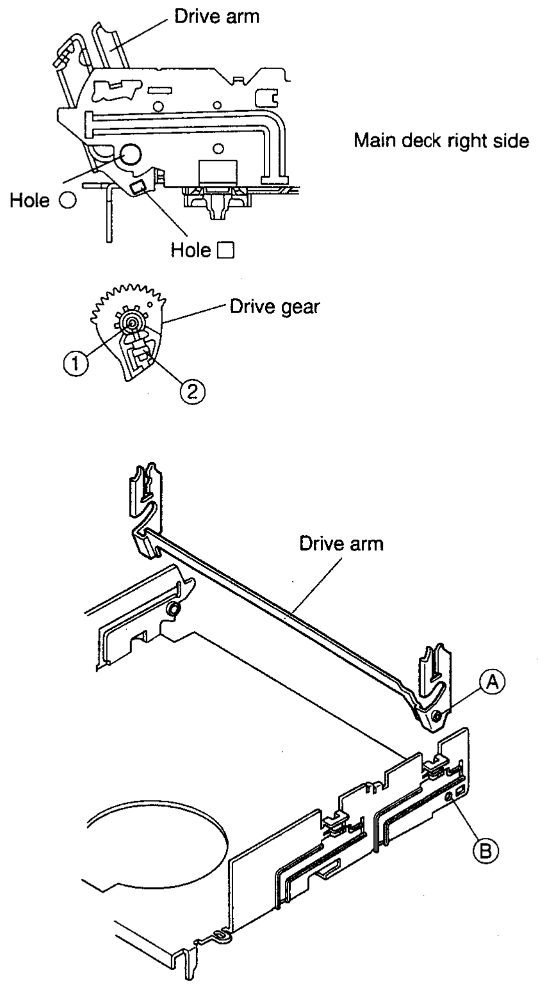

Drive arm
Main deck right side
Hole ○
Hole □
Drive gear
①
②
Drive arm
Ⓐ
Ⓑ

Fig. 2-2-7

2. How to install (Phase matching)

(1) Insert the section Ⓐ of the drive arm into the section Ⓑ of the main deck.
(2) Insert the section ① of the drive gear into the round hole, and the section ② into the square hole on the drive arm. (See Fig.2-2-7.)
(3) Hold the drive arm upright and fit the leg Ⓒ on the right side of the cassette holder assembly into the groove. (See Fig.2-2-8.)
(4) While swinging the lock lever (R) of the cassette holder assembly toward the front, put the legs Ⓐ and Ⓑ into the rail. (See Fig.2-2-8.)
(5) Drop the three legs on the left side of the cassette holder assembly into the groove at one time. (See Fig.2-2-9.)
(6) Slide the whole cassette holder assembly toward the front to bring it to the eject end position.
(7) Install the limit gear so that the notch on the outer circumference of the limit gear is brought into alignment with the guide hole on the main deck. (See Fig.2-2-10.)
(8) Install so that the notch on the periphery of the relay gear is aligned with the notch of the main deck and that hole A of the relay gear is aligned with the hole A of the limit gear and that hole B of the relay gear is aligned with the hole B of the drive gear. (See Fig.2-2-10.)
(9) Install the door opener, opener guide, spring(A) and cassette housing bracket and fasten the two slit washers.

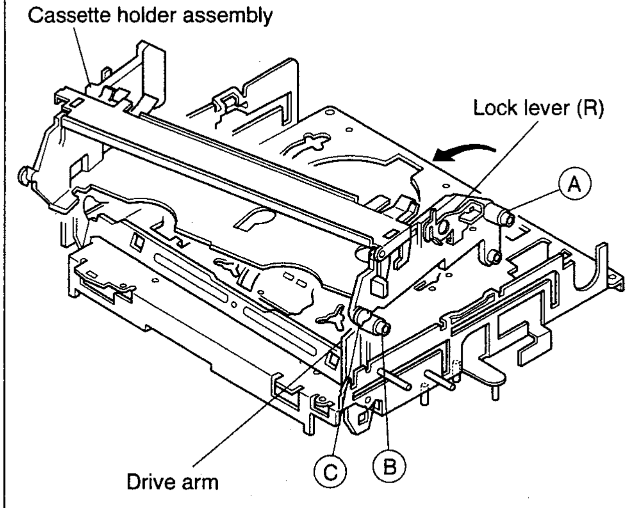

Cassette holder assembly
Lock lever (R)
Ⓐ
Drive arm
Ⓒ
Ⓑ

Fig. 2-2-8

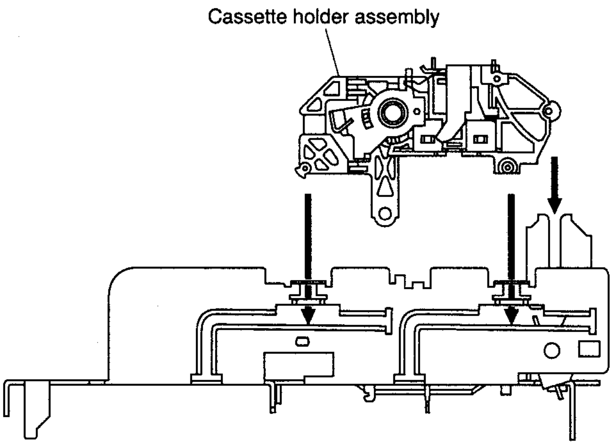

Cassette holder assembly

Fig. 2-2-9

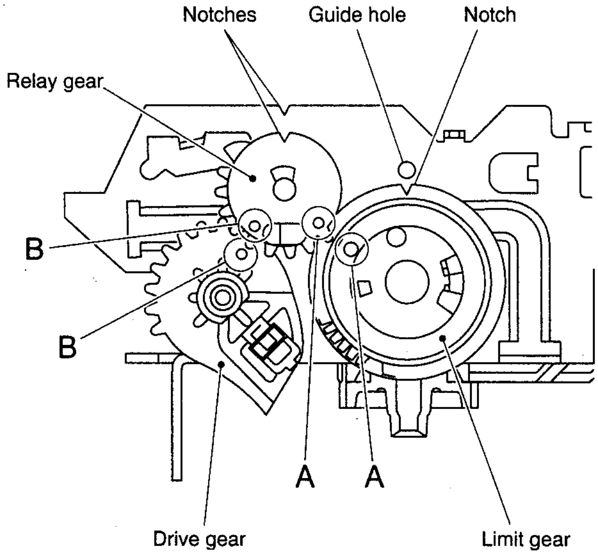

Notches
Guide hole
Notch
Relay gear
B
B
A
A
Drive gear
Limit gear

Fig. 2-2-10

2.2.4 Pinch Roller Arm Assembly

1. How to remove

(1) Remove the spring from the hook of the press lever assembly.

(2) Remove the slit washer and remove the pinch roller seat 2. (See Fig.2-2-11.)

(3) Remove the pinch roller arm assembly by pulling it up.

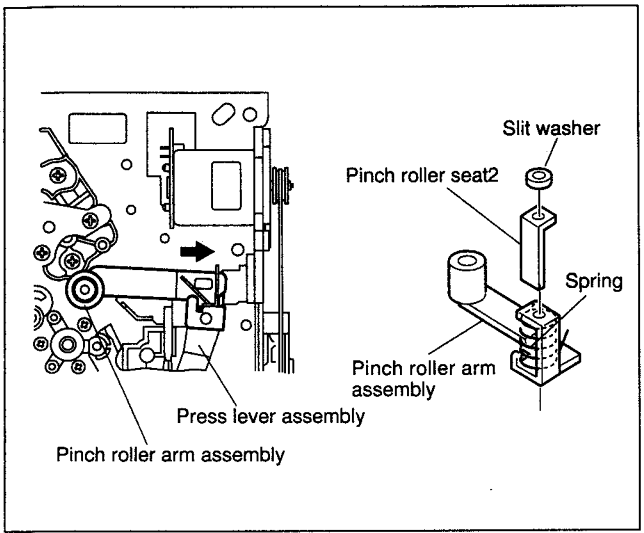

Slit washer
Pinch roller seat2
Spring
Pinch roller arm assembly
Press lever assembly
Pinch roller arm assembly

Fig. 2-2-11

2.2.5 Guide Arm Assembly and Press Lever Assembly

1. How to remove

(1) Remove the spring and expand the lug of the lid guide in the arrow-indicated direction. Then remove the guide arm assembly by pulling it up.

(2) Remove the press lever assembly by pulling it up. (See Fig.2-2-12.)

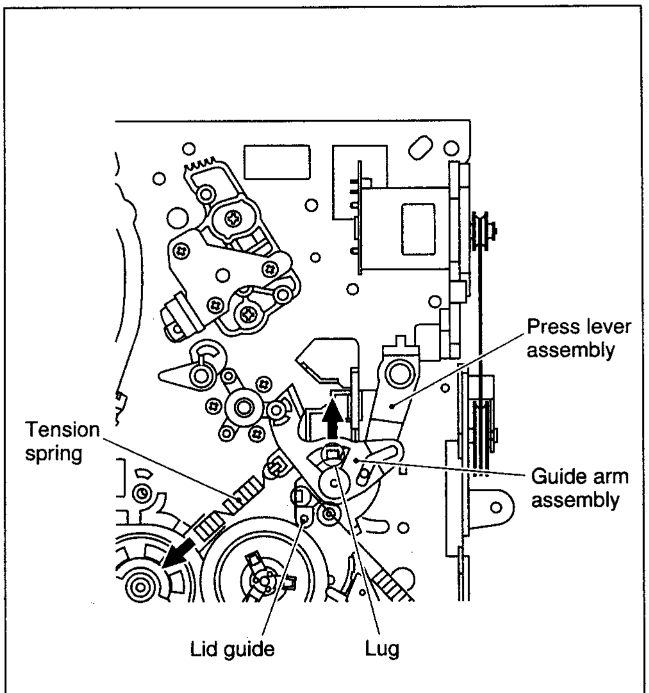

Press lever assembly
Tension spring
Guide arm assembly
Lid guide
Lug

Fig. 2-2-12

2.2.6 Audio Control Head

1. How to remove

(1) Remove the two screws (A) and remove the audio control head together with the head base.

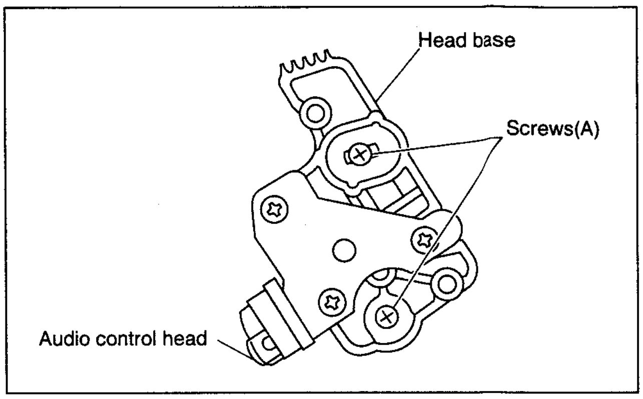

Head base
Screws(A)
Audio control head

Fig. 2-2-13

(2) When replacing only the audio control head, remove the three screws (B) while controlling the compression spring.

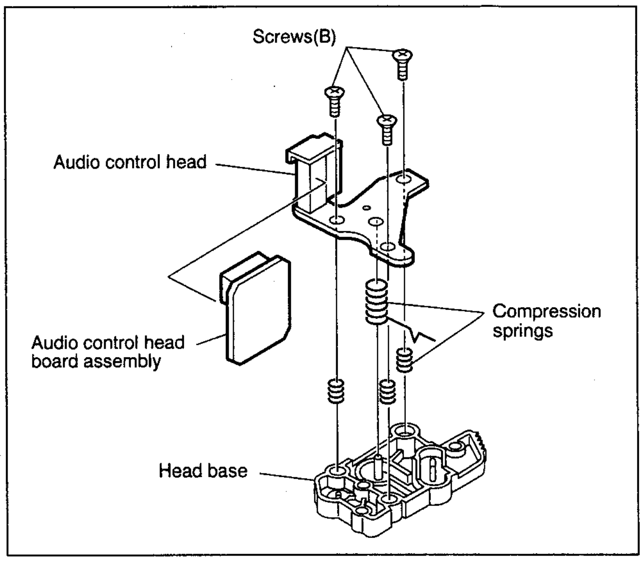

Screws(B)
Audio control head
Compression springs
Audio control head board assembly
Head base

Fig. 2-2-14

2. How to install

(1) To make the post-installation adjustment easier, set the temporary level as indicated in Fig.2-2-15. Also make sure that the screw center is brought into alignment with the center position of the slot.

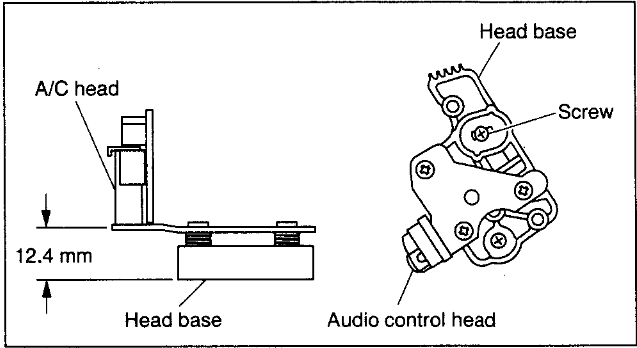

Head base
A/C head
Screw
12.4 mm
Head base
Audio control head

Fig. 2-2-15

2.2.7 Loading Motor

1. How to remove

(1) Remove the belt wound around the worm gear.

(2) Open the two lugs of the motor guide and remove the loading motor, loading motor board assembly and motor guide altogether by pulling them up.

(3) When replacing the loading motor board assembly, take care with the orientation of the loading motor. (Install so that the loading motor label faces upward.)

(4) When the motor pulley has been replaced, choose the fitting dimension as indicated in Fig.2-2-16.

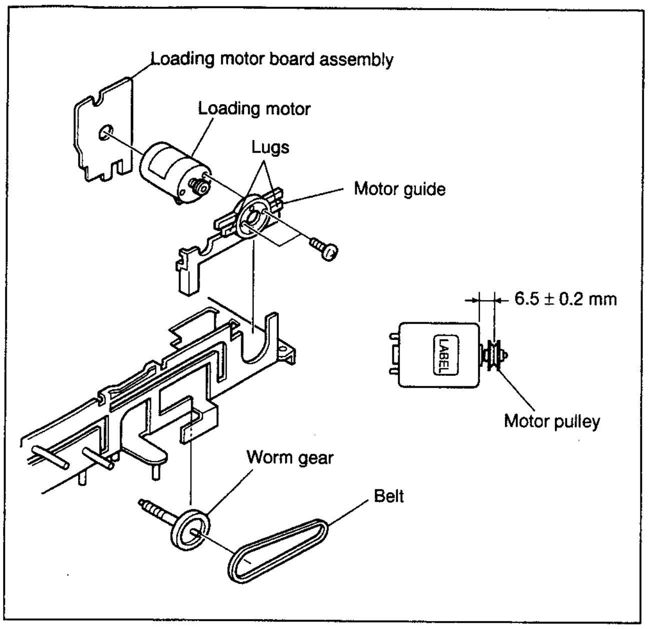


Fig. 2-2-16

2.2.8 Capstan Motor

1. How to remove

(1) Remove the belt (capstan) on the mechanism assembly back side.

(2) Remove the three screws (A) and remove the capstan motor.

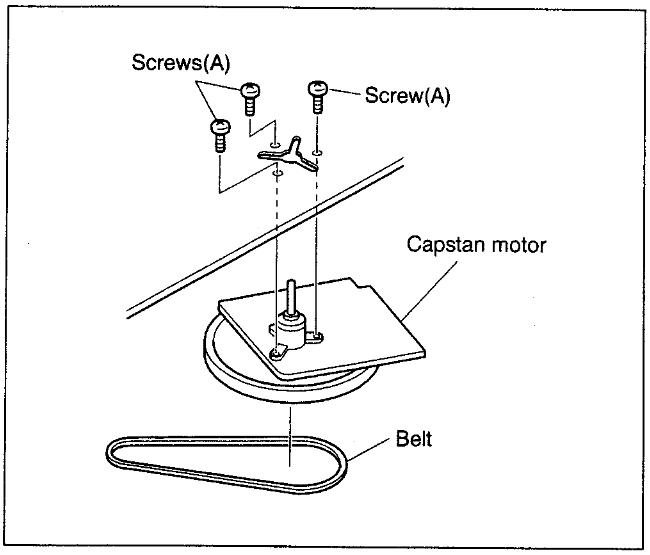


Fig. 2-2-17

2. How to install (Centering the mounting position)

When the capstan motor has once been removed and then reinstalled out of the initial correct position in the rotational direction, the capstan motor current may be unstable during operation in high or low temperatures. This may result in greater Wow & Flutter and occasionally in power breakdown because of current over - load. Install the capstan motor while following the procedure given below.

(The capstan motor is centrally located when the unit is shipped from the factory.)

(1) Provisionally tighten the three screws (A) securing the capstan motor.

(2) Install the mechanism assembly to which the capstan motor is provisionally fastened on the bottom chassis which incorporates the Main board assembly. (No need to tighten the screws for mounting the mechanism.) Make sure that all the connectors for the mechanism assembly and the Main board assembly are correctly installed as indicated in Fig. 2-2-18.

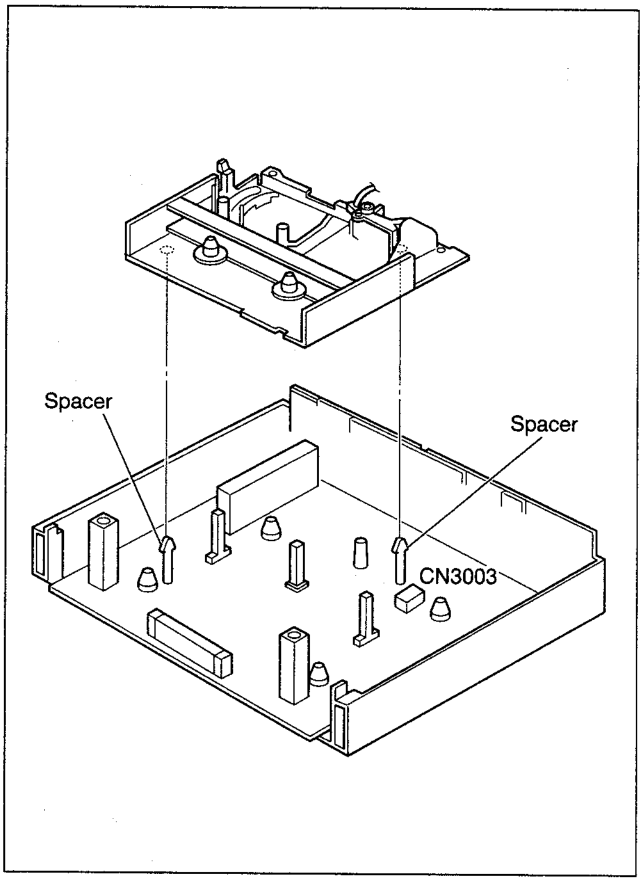


Fig. 2-2-18

(3) Making sure that the connector CN3003 of the capstan motor is correctly mounted, and securely tighten the three screws (A).

Note: ***When the capstan motor has been replaced with a new one, perform recording in the LP mode for at least 2 minutes at normal temperatures immediately before starting the FF/REW or SEARCH operations (Aging).***

2.2.9 Pole Base Assembly (supply or take-up side)

1. How to remove

(1) Remove the UV catcher 2 on the removal side by loosening the screw (A).

(2) Remove the pole base assembly on the supply side from the mechanism assembly by loosening the screw (B) on the mechanism assembly back side and sliding the pole base assembly toward the UV catcher 2.

(3) As for the pole base assembly on the take-up side, turn the pulley of the loading motor to lower the cassette holder because the screw (B) is hidden under the control plate. (See the "Procedures for Lowering the Cassette holder assembly" of 1.3 DISASSEMBLY/ASSEMBLY METHOD.) Further turn the motor pulley to move the cassette holder until the screw (B) is no longer under the control plate (in the half-loading position). Then remove it as done for the supply side by removing the screw (B).

NOTE: *After reinstalling the Pole base assembly and the UV catcher2, be sure to perform compatibility adjustment.*

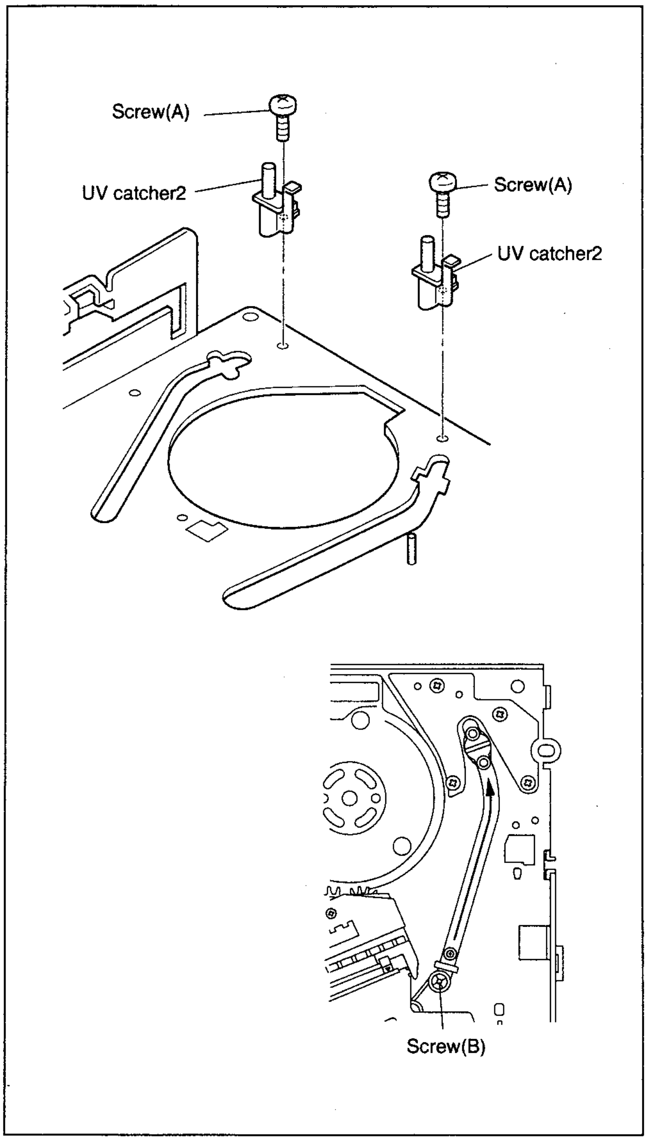

Screw(A)
UV catcher2
Screw(A)
UV catcher2
Screw(B)

Fig. 2-2-19

2.2.10 Rotary Encoder

1. How to remove

(1) Remove the screw (A) and remove the rotary encoder by pulling it up. (See Fig. 2-2-20.)

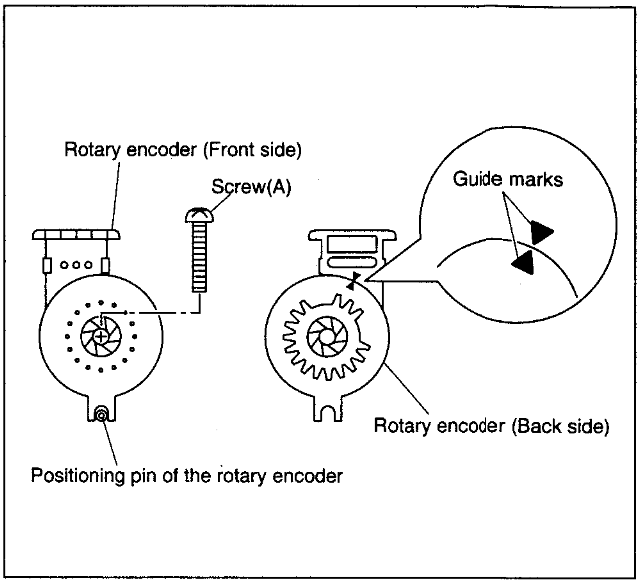

Rotary encoder (Front side)
Screw(A)
Guide marks
Rotary encoder (Back side)
Positioning pin of the rotary encoder

Fig. 2-2-20

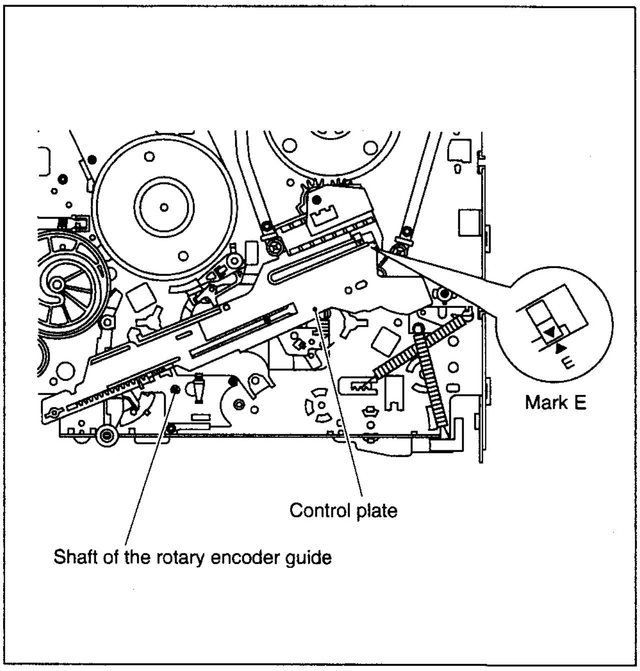

Mark E
E
Control plate
Shaft of the rotary encoder guide

Fig. 2-2-21

2. How to install (Phase matching)

(1) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft and bring the guide marks on the rotary encoder into alignment as indicated in Fig.2-2-20. (See Fig. 2-2-20 and Fig. 2-2-21.)

(2) Turn over the rotary encoder with its guide marks kept in alignment and install it by fitting on the shaft of the rotary encoder guide and the positioning pin.

(3) Tighten the screw (A) to complete the installation.

2.2.11 Clutch Unit

(1) Remove the belt wound around the capstan motor and the clutch unit.
(2) Remove the slit washer and remove the clutch unit.

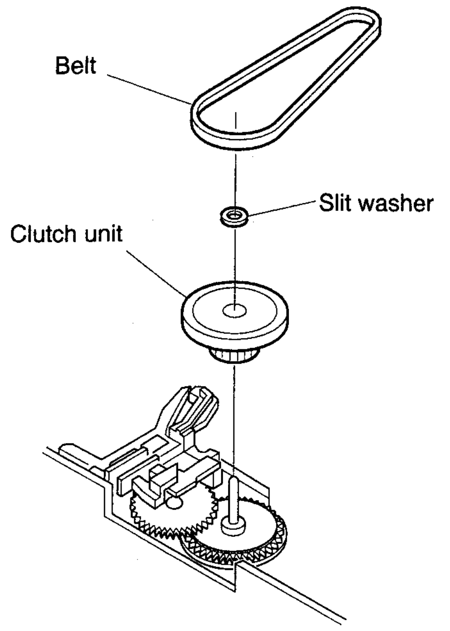

Belt
Slit washer
Clutch unit

Fig. 2-2-22

2.2.12 Change Lever Assembly, Direct Gear and Clutch Gear1

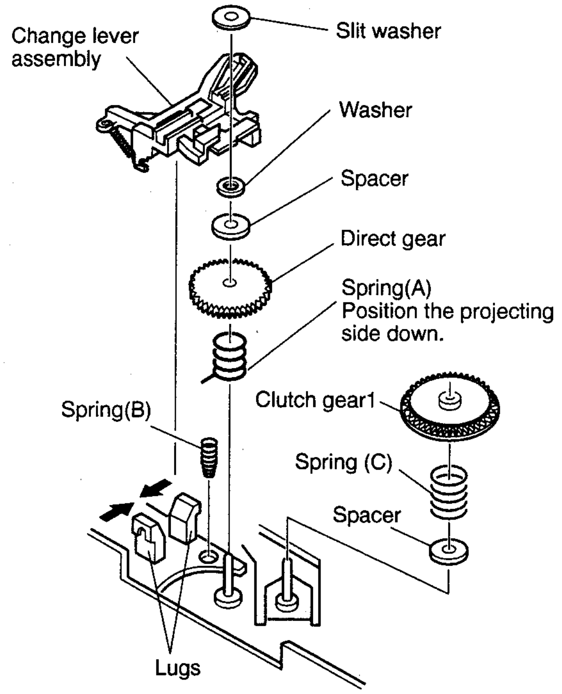

Change lever assembly
Slit washer
Washer
Spacer
Direct gear
Spring(A)
Position the projecting side down.
Clutch gear1
Spring(B)
Spring (C)
Spacer
Lugs

Fig. 2-2-23

1. How to remove

(1) Release the two lugs of the rotary encoder guide in the arrow-indicated direction and remove the change lever assembly.
(2) Remove the slit washer retaining the direct gear and remove the latter.
Take care so as not to lose the washer and spring. (See Fig.2-2-23.)

2. How to install

(1) Install the clutch gear1, spring (A), spring (C), direct gear, spacer and others to the individual shafts of the main deck, and finally the slit washer. (See Fig.2-2-23.)
(2) Let the spring (B) drops into the rotary encoder guide hole and install the change lever assembly.(Take care not to mistake a direction of the spring.) The point is to slightly lift the clutch gear1 and catch it from the both sides with the assembly. (See Fig.2-2-24.)

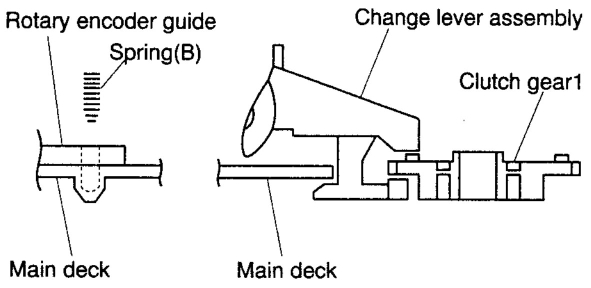

Rotary encoder guide
Spring(B)
Change lever assembly
Clutch gear1
Main deck
Main deck

Fig. 2-2-24

2.2.13 Link Lever

1. How to remove

(1) Remove the two slit washers.
(2) Remove the link lever by lifting it from the shaft retained by the slit washers. Then swing the link lever counterclockwise and remove it from the locking section of the control plate.

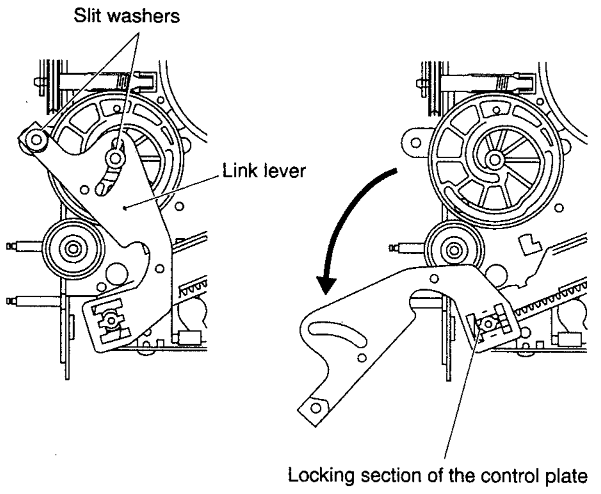

Slit washers
Link lever
Locking section of the control plate

Fig. 2-2-25

2. How to install (Phase matching)

(1) Slide the control plate so that its mark E is aligned with the mark ▼ on the loading arm gear shaft. (See Fig.2-2-26.)

(2) Rotate the worm gear until the guide hole of the control cam is aligned exactly with the guide hole of the main deck. (See Fig.2-2-27.)

(3) Insert the link lever into the locking section of the control plate. (See Fig.2-2-25.)

(4) Rotate the link lever clockwise so that it is installed on the shafts in the center and on the left of the control cam.

(5) Fasten the slit washers at these two points.

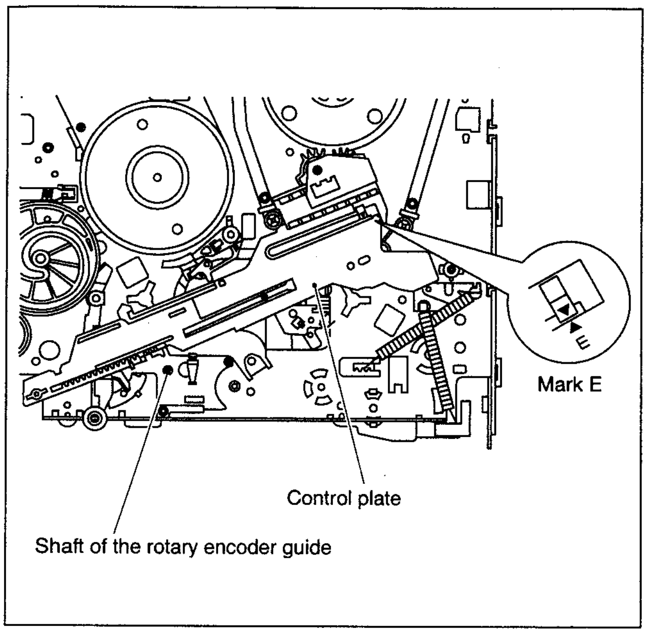

E
Mark E
Control plate
Shaft of the rotary encoder guide

Fig. 2-2-26

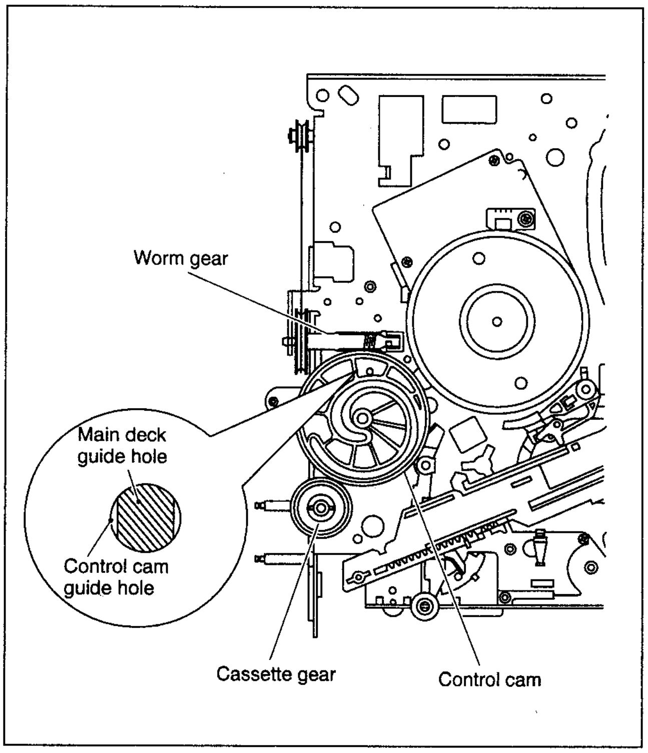

Worm gear
Main deck guide hole
Control cam guide hole
Cassette gear
Control cam

Fig. 2-2-27

2.2.14 Cassette Gear, Control Cam and Worm Gear

1. How to remove

(1) Remove the control cam by lifting it.

(2) Open the two lugs of the cassette gear outward and pull the latter off.

(3) Remove the belt wound around the worm gear and the loading motor.

(4) Open the lug of the lid guide outward and remove the worm gear.

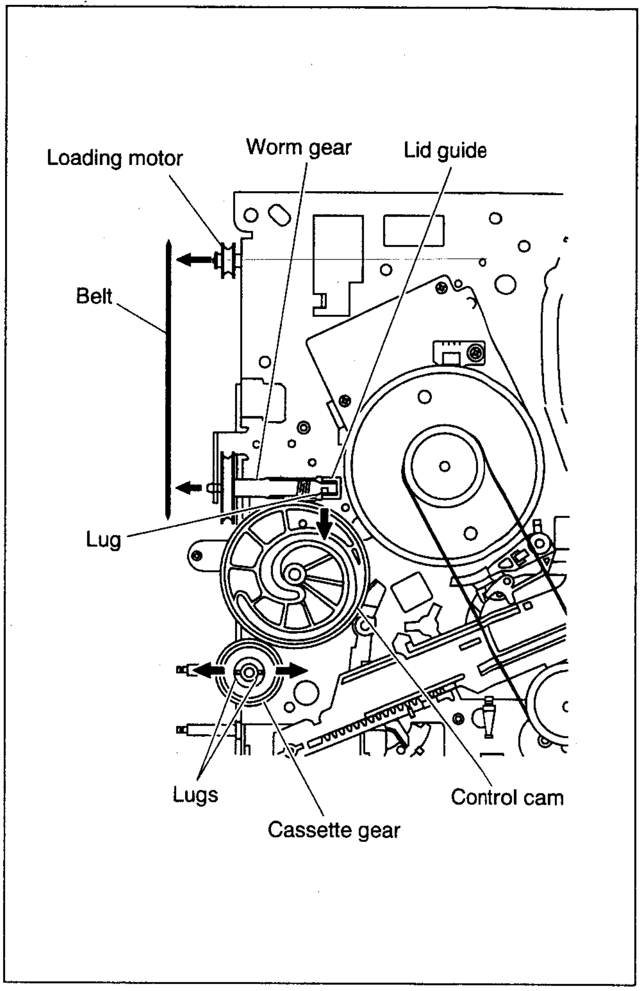

Loading motor
Worm gear
Lid guide
Belt
Lug
Lugs
Cassette gear
Control cam

Fig. 2-2-28

2.2.15 Control Plate

1. How to remove

(1) Remove the screw (A) retaining the control bracket 1 and remove the latter.

(2) Slide the control plate as indicated by the arrow and remove the control plate. (See Fig.2-2-29.)

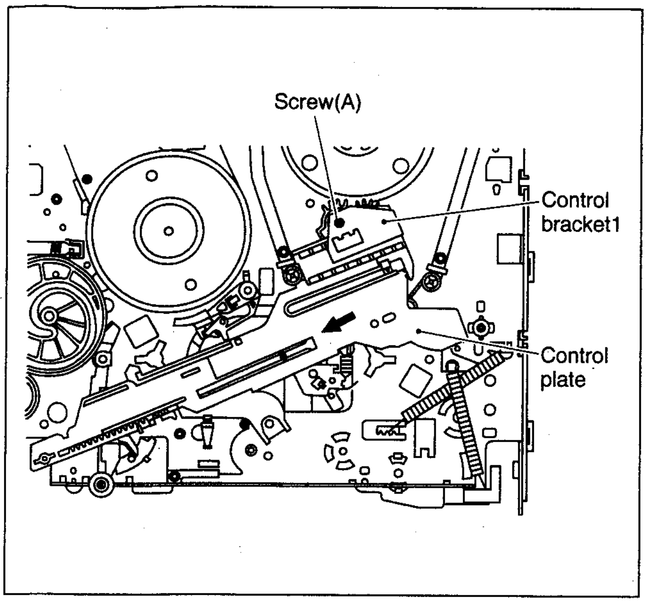

Screw(A)
Control bracket1
Control plate

Fig. 2-2-29

2. How to install (Phase matching)

(1) Adjust the position of the idler arm assembly pin as indicated in Fig.2-2-30 (to the left of centre of the R section).

(2) Bring the guide hole of the take-up lever into alignment with the hole at the control plate guide and fix the position by inserting a 1.5 mm hexagonal wrench.

(3) Install the control plate so that the section A of the loading arm gear shaft fits into the hole (A) of the control plate, the section B of the control plate guide into the hole (B), and the control plate comes under the section C of the rotary encoder guide and the section D of the loading arm gear shaft while press-fit the pole base assmebly (supply side) as indicated by the arrow. It is important that the tension arm assembly shaft is positioned closer toward you than the control plate. (See Fig.2-2-31.)

(4) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft. (See Fig.2-2-31.)

(5) Pull off the hexagonal wrench for positioning.

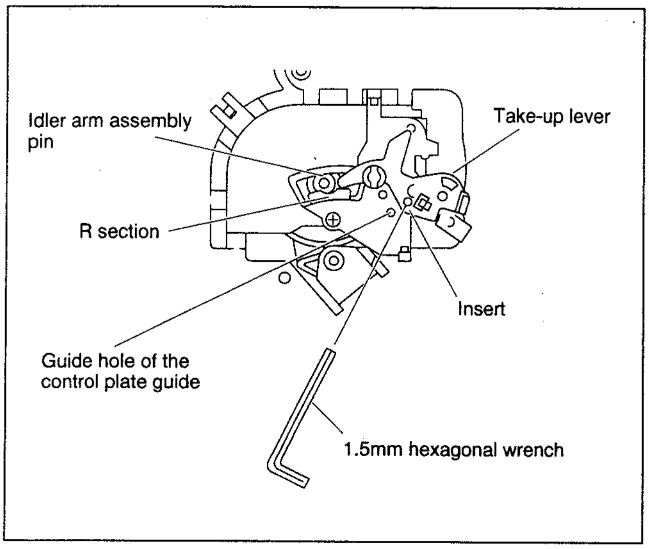

Idler arm assembly pin
Take-up lever
R section
Insert
Guide hole of the control plate guide
1.5mm hexagonal wrench

Fig. 2-2-30

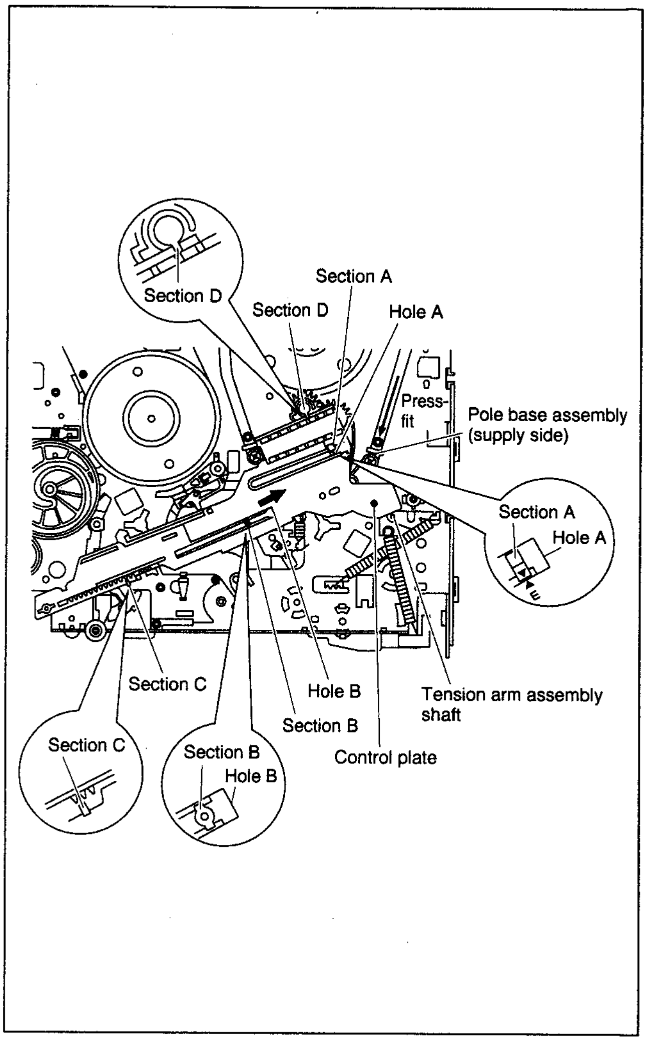

Section D
Section A
Section D
Hole A
Press-fit
Pole base assembly (supply side)
Section A
Hole A
E
Section C
Hole B
Tension arm assembly shaft
Section B
Section C
Section B
Hole B
Control plate

Fig. 2-2-31

2.2.16 Loading Arm Gear (supply or take-up side) and Loading Arm Gear Shaft

1. How to remove

(1) Remove the loading arm gear (supply side) by loosening the screw (A). (See Fig. 2-2-32.)

(2) Remove the screw (B) and remove the torsion arm from the pole base assembly (take-up side). (See Fig.2-2-32.)

(3) Turn the loading arm gear (take-up side) clockwise so that the notch of the loading arm gear (take-up side) is in alignment with the projection of the loading arm gear shaft and lift it.
Likewise, turn the loading arm counterclockwise so that the notch is in alignment with the projection and remove the loading arm gear (take-up side). (See Fig.2-2-32 and Fig. 2-2-33.)

(4) When removing the loading arm gear shaft, be sure of first removing the screw retaining the drum assembly (on the back side of the loading arm gear shaft). Then remove the screw (C) and remove the loading arm gear shaft by sliding it.

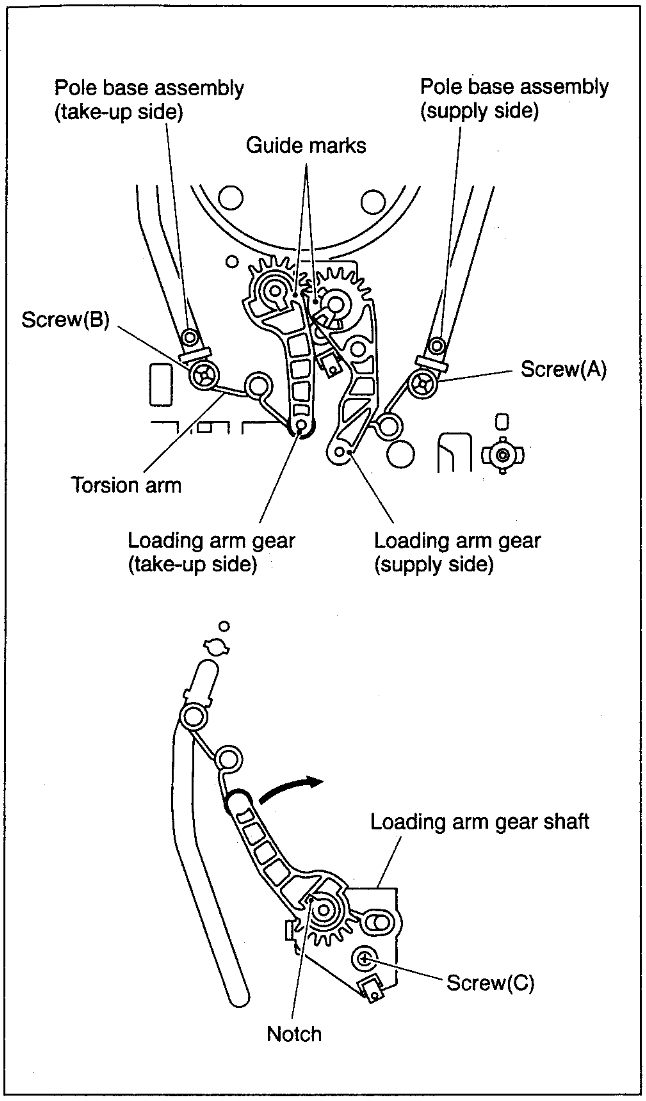

Pole base assembly (take-up side)
Pole base assembly (supply side)
Guide marks
Screw(B)
Screw(A)
Torsion arm
Loading arm gear (take-up side)
Loading arm gear (supply side)
Loading arm gear shaft
Screw(C)
Notch

Fig. 2-2-32

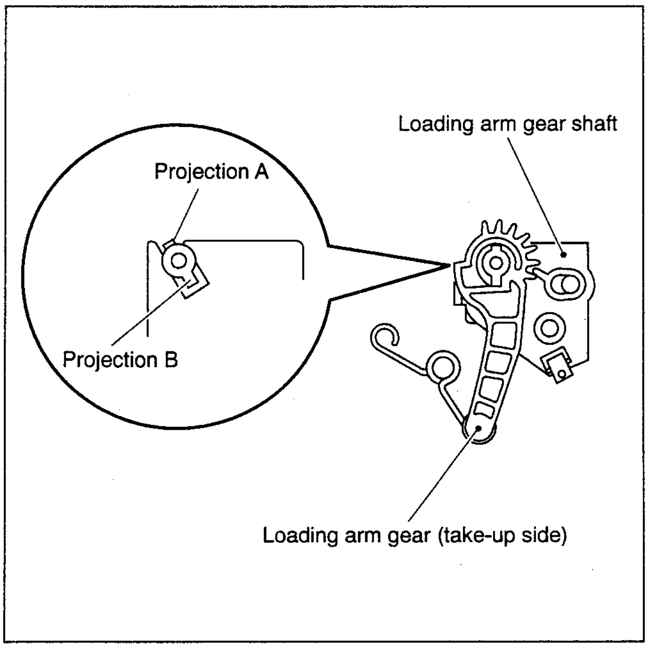

Loading arm gear shaft
Projection A
Projection B
Loading arm gear (take-up side)

Fig. 2-2-33

2. How to install

(1) Align the notch of the loading arm gear (take-up side) to the projection B of the loading arm gear shaft and slip it over. Then rotate it clockwise for alignment with the projection A and slip it down to the bottom. (See Fig.2-2-33.)

(2) Then turn the loading arm gear (take-up side) counterclockwise. Hang the torsion arm on the pole base assembly (take-up side) and tighten the screw (B).

(3) Install the loading arm gear (supply side) so that the guide mark of the loading arm gear (take-up side) is in alignment with the guide mark of the loading arm gear (supply side). Then hang the torsion arm on the pole base assembly (supply side) and tighten the screw (A). (See Fig.2-2-32.)

2.2.17 Take-up Lever, Take-up Head and Control Plate Guide

(1) Remove the spring of the take-up lever from the main deck.

(2) Remove the lug (A) of the take-up lever from the main deck and pull out the take-up lever and the take-up head together.

(3) Remove the screw (A).

(4) Align the idler arm assembly pin in the center of the R section of the control plate guide, remove the control plate guide lugs (B) and (C) from the main deck, and remove the control plate guide.

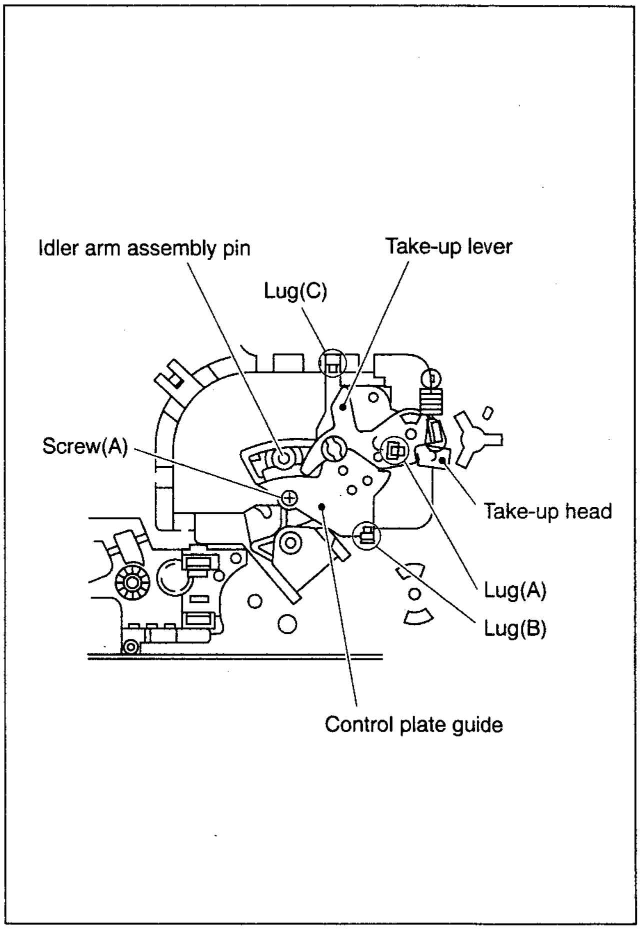

Idler arm assembly pin
Take-up lever
Lug(C)
Screw(A)
Take-up head
Lug(A)
Lug(B)
Control plate guide

Fig. 2-2-34

2.2.18 Capstan Brake Assembly

1. How to remove

(1) Move the lug (A) of the capstan brake assembly in the arrow-indicated direction so that it comes into alignment with the notch of the main deck. (See Fig. 2-2-35.)

(2) Remove the lug (B) of the capstan brake assembly from the main deck and remove the capstan brake assembly.

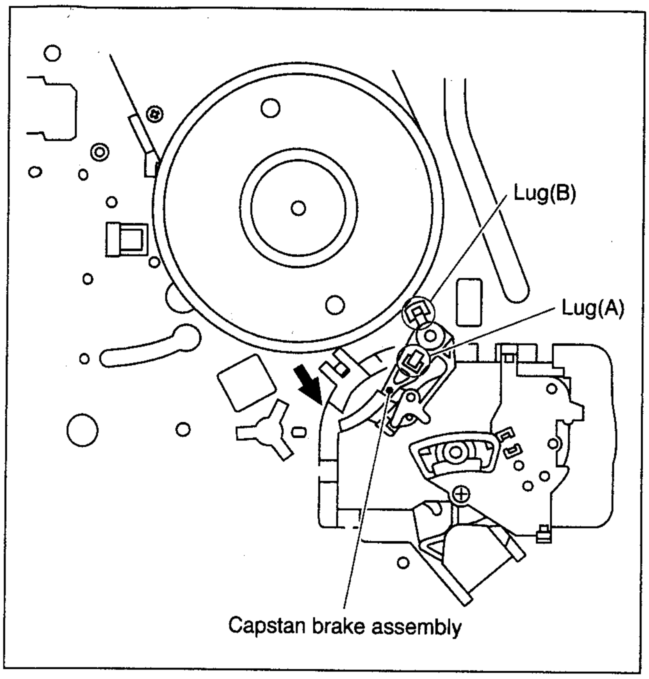

Lug(B)
Lug(A)
Capstan brake assembly

Fig. 2-2-35

2.2.19 Sub Brake Assembly (take-up side)

1. How to remove

(1) Remove the spring attached to the lid guide and sub brake assembly (take-up side).

(2) Bring the lug (A) of the sub brake assembly (take-up side) into alignment with the notch of the main deck.

(3) Remove the lugs (B) and (C) of the sub brake assembly (take-up side) from the main deck and remove the sub brake assembly (take-up side).

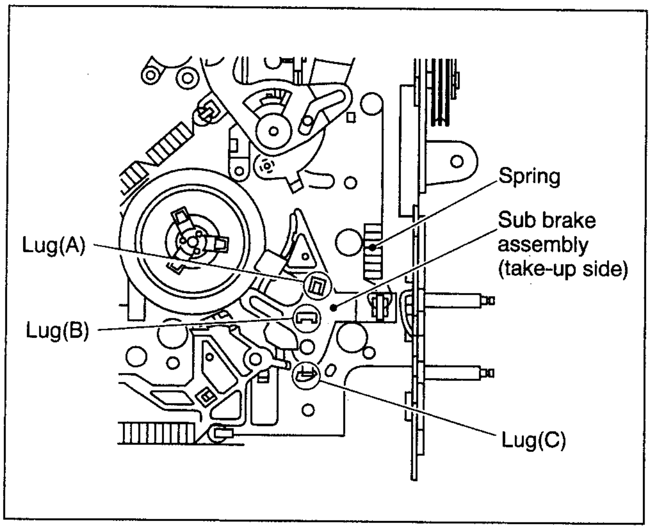

Spring
Sub brake assembly (take-up side)
Lug(A)
Lug(B)
Lug(C)

Fig. 2-2-36

2.2.20 Main Brake Assembly (take-up side), Reel Disk (take-up side) and Main Brake Assembly (supply side)

1. How to remove

(1) Move the main brake assembly (take-up side) in the arrow-indicated direction and remove the reel disk (take-up side).

(2) Remove the spring attached to the main brake assembly.

(3) Remove the lug (A) of the main brake assembly (take-up side) and pull out the lug (B) after bringing it into alignment with the main deck notch.

(4) Remove the lugs (C), (D) and (E) of the main brake assembly (supply side) from the main deck and pull them off. (See Fig.2-2-37.)

Note: *If the main brake assembly is difficult to remove, press it and hold the adjustment pin from the back side of the main deck when attempting to remove it.*
After the adjustment pin has been removed or the main brake assembly or the reel disk on the supply or take-up side have been replaced, it is required to adjust the main brake assembly torque. See page 2-23 for the detailed adjustment procedures.

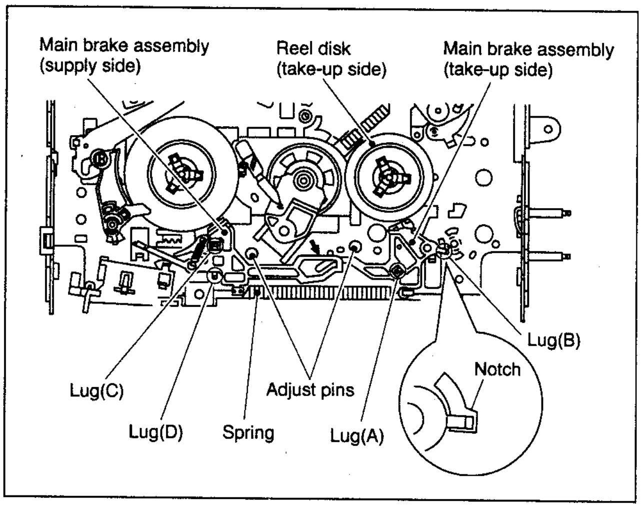

Main brake assembly (supply side)
Reel disk (take-up side)
Main brake assembly (take-up side)
Lug(B)
Notch
Lug(C)
Adjust pins
Lug(D)
Spring
Lug(A)

Fig. 2-2-37

(5) When installing the main brake assembly (take-up side), slide the brake lever in the direction as indicated by the arrow to prevent it from hitting the projection of the main brake assembly (take-up side). (See Fig.2-2-38.)

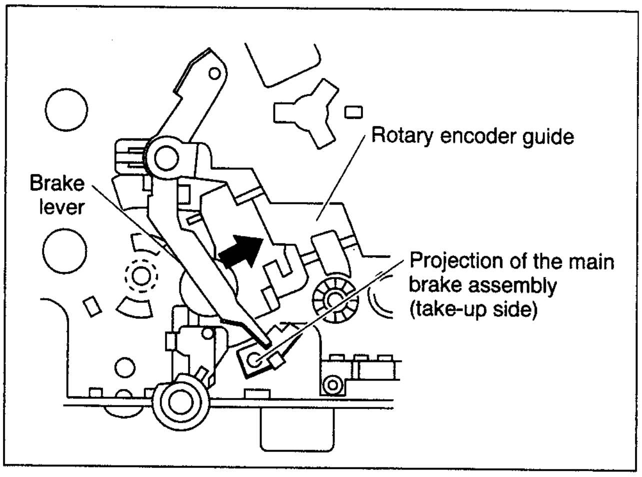

Rotary encoder guide
Brake lever
Projection of the main brake assembly (take-up side)

Fig. 2-2-38

2.2.21 Tension Brake Assembly, Reel Disk (supply side) and Tension Arm Assembly

1. How to remove

(1) Remove the three lugs of the tension brake assembly from the main deck and pull them off.
(2) Remove the reel disk (supply side) by loosening in the arrow-indicated direction the main brake assembly (supply side).
(3) Remove the tension spring on the back of the main deck. Then release the lug of the tension arm bearing in the arrow-indicated direction and draw out the tension arm assembly. (See Fig. 2-2-39.)

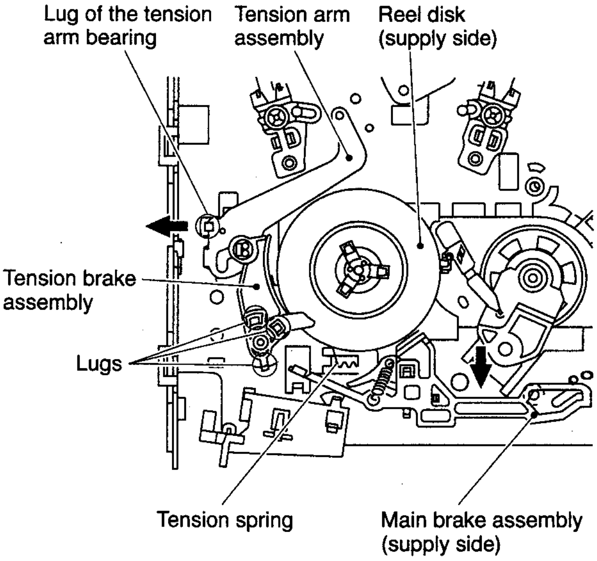

Lug of the tension arm bearing
Tension arm assembly
Reel disk (supply side)
Tension brake assembly
Lugs
Tension spring
Main brake assembly (supply side)

Fig. 2-2-39

2.2.22 Idler Lever, Idler Arm Assembly

1. How to remove

(1) Remove the lug of the idler lever from the main deck and remove the hook fitted in the idler arm assembly hole by lifting it.
(2) Remove the slit washer and pull out the idler arm assembly.

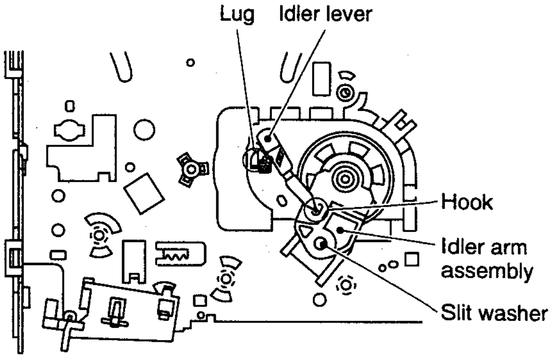

Lug
Idler lever
Hook
Idler arm assembly
Slit washer

Fig. 2-2-40

2.2.23 Stator Assembly

(1) Remove the flat cable.
(2) Remove the two screws (A).
(3) Remove the stator assembly by lifting in the arrow-indicated direction. (Take care that the brush spring does not jump out.)
(4) After installation, be sure to perform the PB switching point adjustment according to the electrical adjustment procedure.

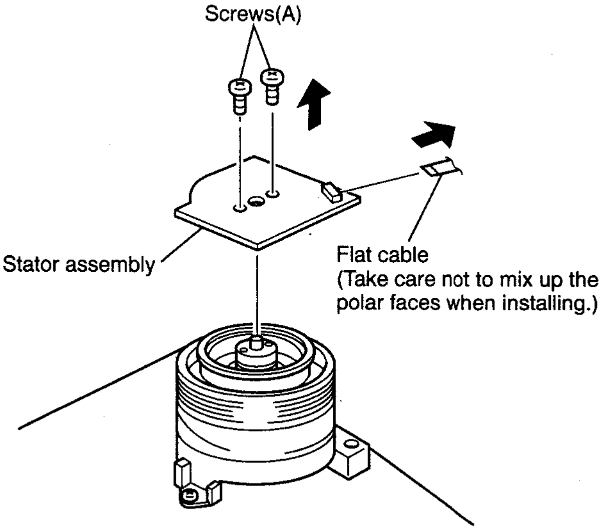

Screws(A)
Stator assembly
Flat cable
(Take care not to mix up the polar faces when installing.)

Fig. 2-2-41

2.2.24 Rotor Assembly

(1) Remove the stator assembly.
(2) Remove the two screws (B) and remove the rotor assembly.

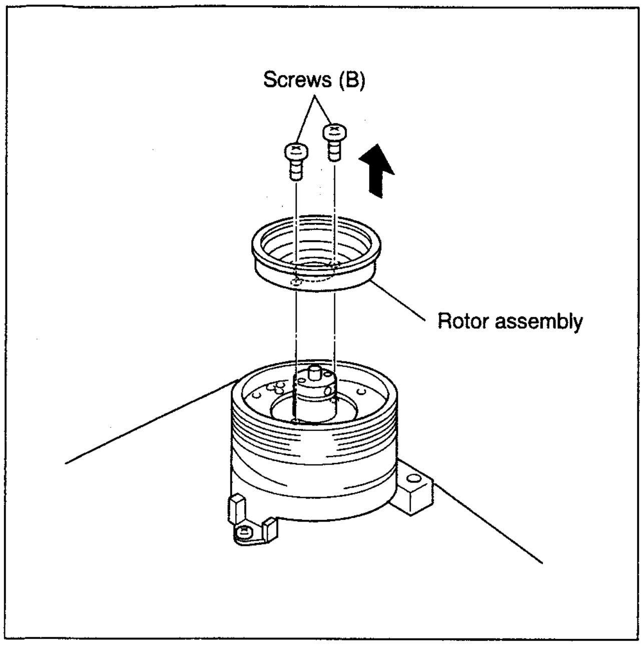

Screws (B)
Rotor assembly

Fig. 2-2-42

Note: *When installing the rotor assembly, note that a normal picture cannot be obtained without ensuring the phase matching as mentioned below.*

(3) Match the phases of the upper drum assembly and the rotor assembly as indicated in Fig.2-2-43.
(4) Place the upper drum assembly hole (a) over the rotor assembly holes (b) (with three holes to be aligned) and tighten the two screws (B). (See Fig.2-2-43.)

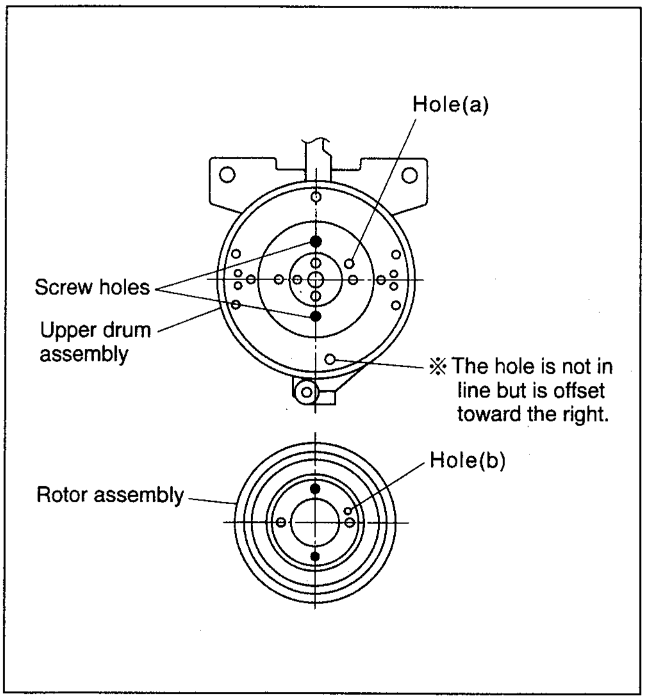

Hole(a)
Screw holes
Upper drum assembly
※The hole is not in line but is offset toward the right.
Hole(b)
Rotor assembly

Fig. 2-2-43

2.2.25 Upper Drum Assembly

1. How to remove

(1) Remove the stator assembly and rotor assembly.
(2) Loosen the screw of the collar assembly using a 1.5 mm hexagonal wrench and remove the collar assembly. Also remove the brush, spring and cap at one time.
(3) Remove the upper drum assembly and remove the washer using tweezers.

Note: *When replacement is required, control the up-down movement of the brush. Never apply grease.*

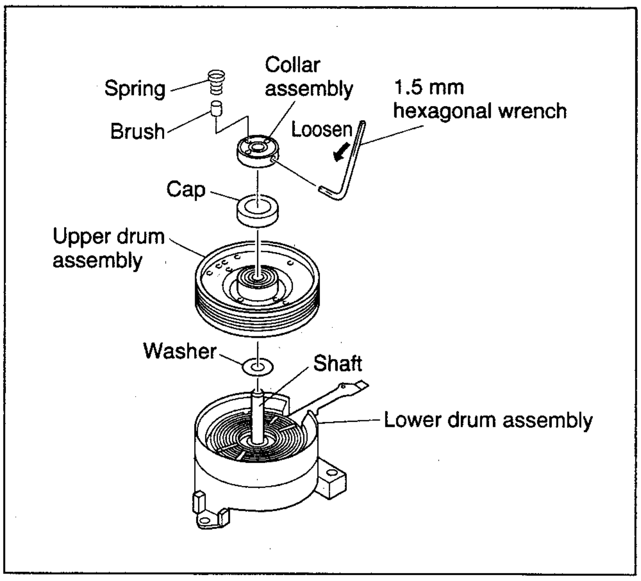

Spring
Collar assembly
1.5 mm hexagonal wrench
Brush
Loosen
Cap
Upper drum assembly
Washer
Shaft
Lower drum assembly

Fig. 2-2-44

2. How to install

(1) Clean the coil parts of the lower drum assembly and the newly installed upper drum assembly with an air brush in advance. (See Fig.2-2-45.)
(2) Install a new washer and upper drum assembly on the drum shaft. (See Fig.2-2-44.)

Note: *When replacing the upper drum assembly, replace it the together with the washer.*

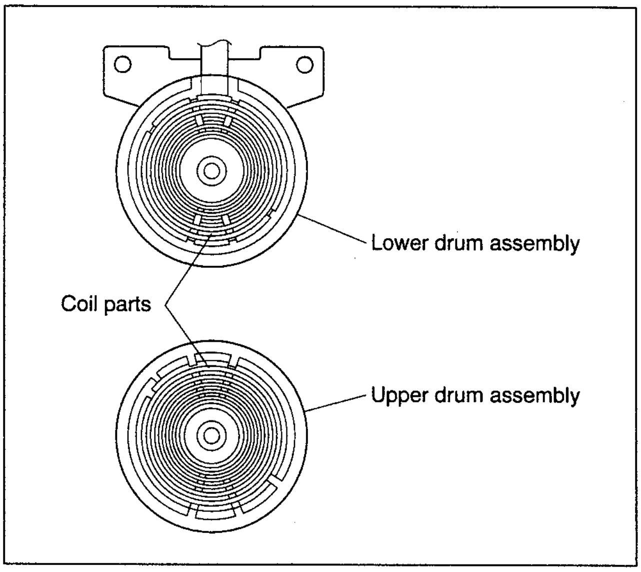

Lower drum assembly
Coil parts
Upper drum assembly

Fig. 2-2-45

(3) Install the cap to the upper drum assembly.
(4) Position the collar assembly as indicated in Fig.2-2-46 while controlling its up- down movement.

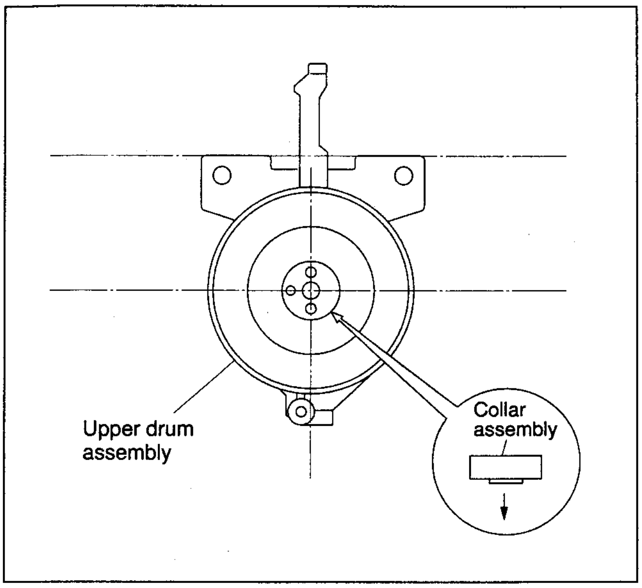


Fig. 2-2-46

(5) Secure the collar assembly in position with a hexagonal wrench while pressing its top with the fingers.

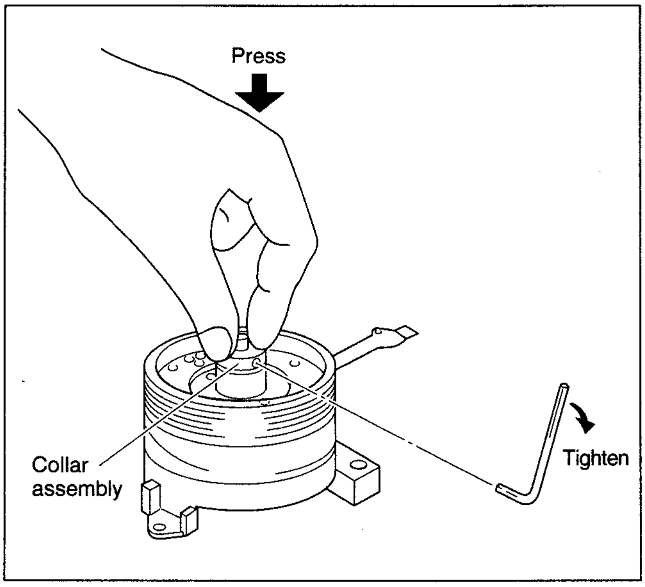


Fig. 2-2-47

(6) After installation, gently turn the upper drum assembly with your hand to make sure that it turns normally. Then install the brush and the spring.
(7) Install the rotor assembly and stator assembly according to Fig 2-2-41 and 2-2-42.
(8) When installation is complete, clean the upper drum assembly and lower drum assembly and carry out the following adjustments.

- PB switching point adjustment
- Slow tracking adjustment
- Compatibility adjustment (Be sure to check for compatibility for the LP mode.)

2.3 COMPATIBILITY ADJUSTMENT

Notes: • *Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the audio control head, drum assembly or any part of the tape transport system.*

• *To avoid any damage to the alignment tape while performing the compatibility adjustment, get a separate cassette tape (for recording and play back) ready to be used for checking the initial tape running behavior.*

2.3.1 Checking/Adjustment of FM Waveform Linearity

(1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
(2) Playing the alignment tape MHPE, observe the FM waveform.
(3) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings tracking to the centre.)
(4) Make sure that there is no significant level drop of the FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig.2-3-1.)
(5) Reduce the FM waveform while pressing the channel buttons (▲, ▼) during playback. If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver (PTU94002) to make the FM waveform linear.
If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the guide roller to make it linear. (See Fig.2-3-3.)
(6) Then play MHPE-L and make sure that the FM waveform varies in parallel and linearly with the tracking operation. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
(7) Unload the cassette tape once, play the alignment tape MHPE-L again and confirm the FM waveform.

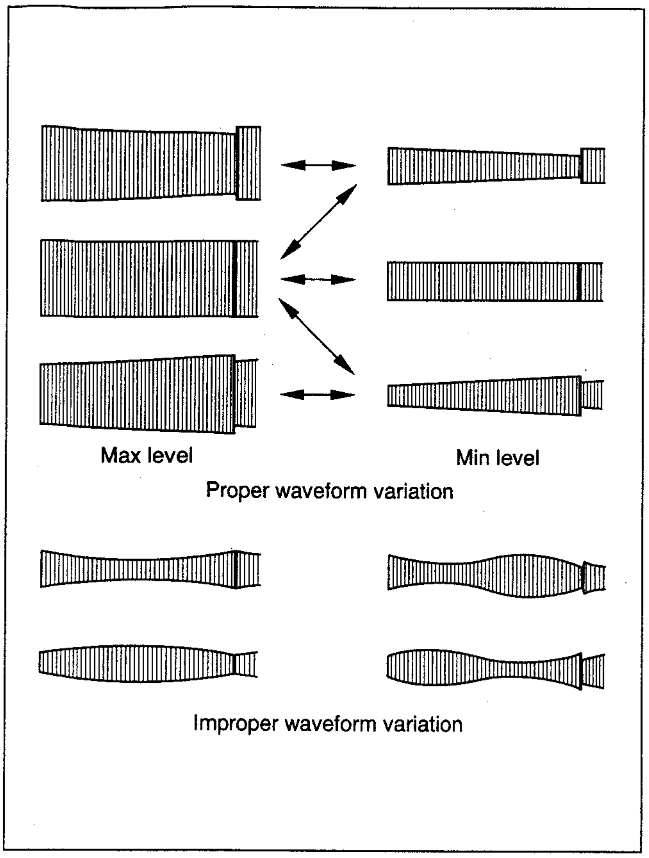

Max level
Min level
Proper waveform variation
Improper waveform variation

Fig. 2-3-1

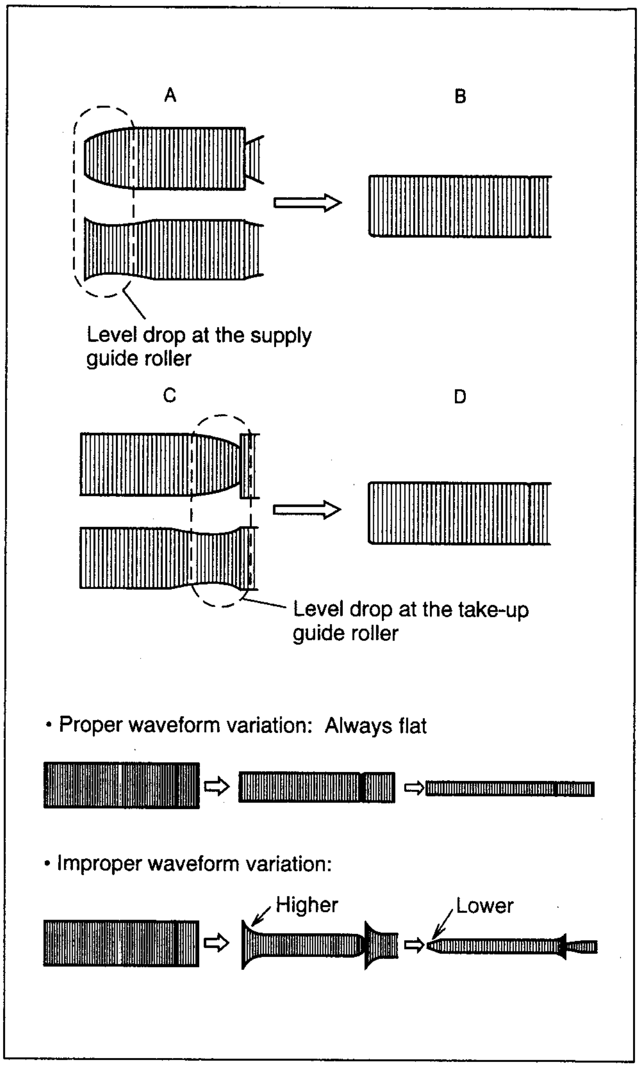

A
B
Level drop at the supply guide roller
C
D
Level drop at the take-up guide roller
• Proper waveform variation: Always flat
• Improper waveform variation:
Higher
Lower

Fig. 2-3-3

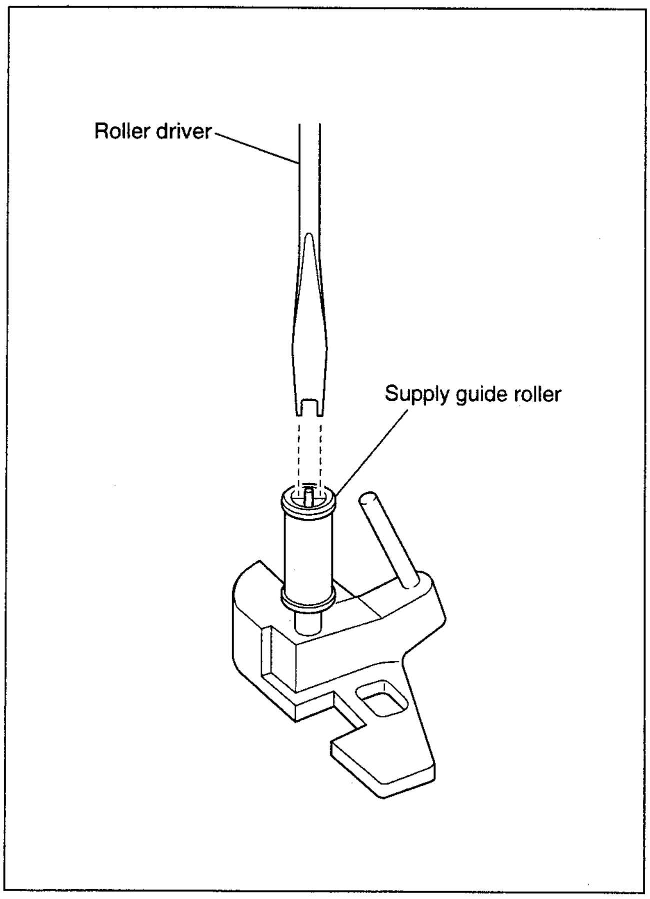

Roller driver
Supply guide roller

Fig. 2-3-2

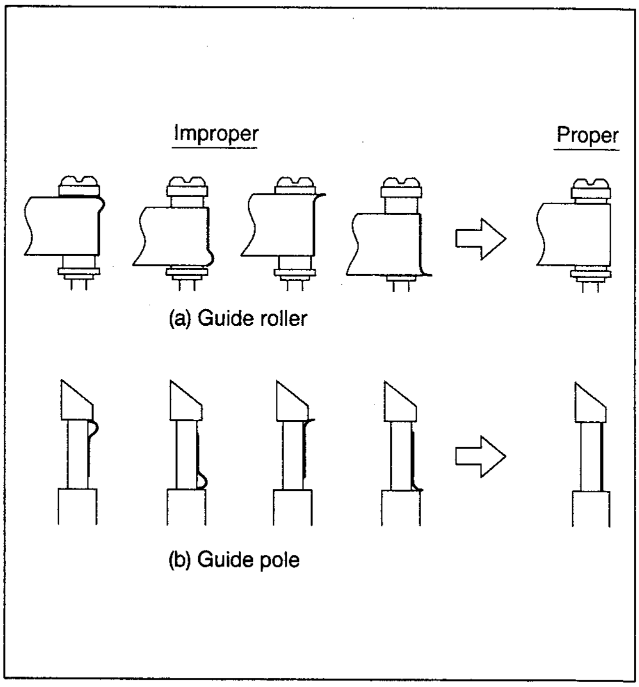

Improper
Proper
(a) Guide roller
(b) Guide pole

Fig. 2-3-4

2.3.2 Checking/Adjustment of the Height and Tilt of the Audio Control Head

Note: ***Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (See Fig.2-2-15.)***

(1) Connect CH-1 of the oscilloscope to AUDIO OUT and CH-2 to TP4001 (CTL.P) of the main board assembly and observe the waveforms on both channels in the ALT mode.

(2) Play the alignment tape MHPE and adjust it by turning the screws (1), (2) and (3) little by little until the waveform of both the audio output signal and the control pulse reach maximum. The screw (1) and screw (3) are for adjustment of tilt and screw (2) for azimuth.

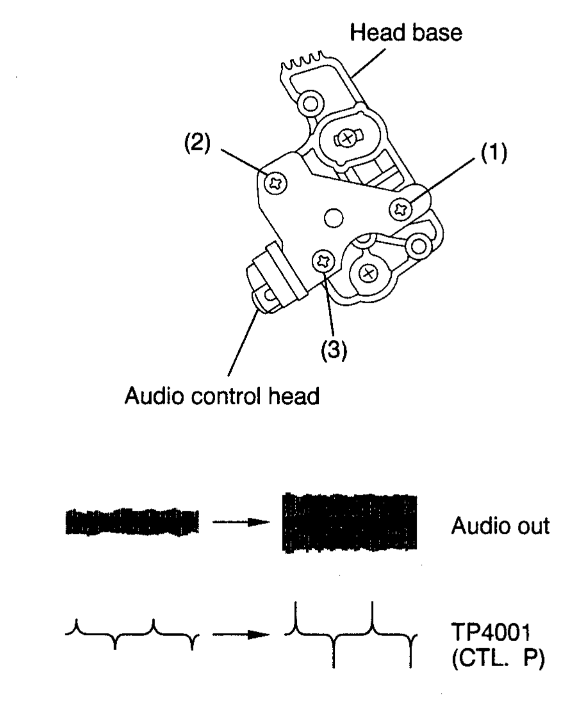


Fig. 2-3-5

2.3.3 Checking/Adjustment of the Audio Control Head Phase (X-Value)

(1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.

(2) Play the alignment tape MHPE and observe the FM waveforms.

(3) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings tracking to the centre.)

(4) Loosen screws (4) and (5) so that the A/C head position bit (PTU94010) is set as indicated in Fig.2-3-6.

(5) Turn the A/C head position bit fully toward the capstan. Then turn it back gradually toward the drum and stop on the second peak point position of the FM waveform output level. Then tighten the screw (4) temporarily.

(6) Then play the alignment tape MHPE-L.

(7) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings the tracking to the centre.)

(8) Perform the tracking operation and make sure that the FM waveform is at its maximum.

(9) If it is not at maximum, loosen the temporarily tightened the screw (4) and turn the A/C head position bit to bring the audio control head to a position, around where the waveform reaches its maximum for the first time. Then tighten the screws (4) and (5).

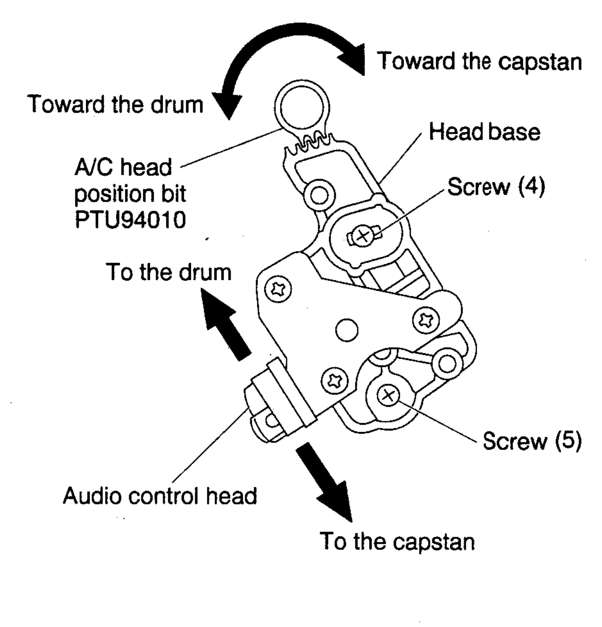


Fig. 2-3-6

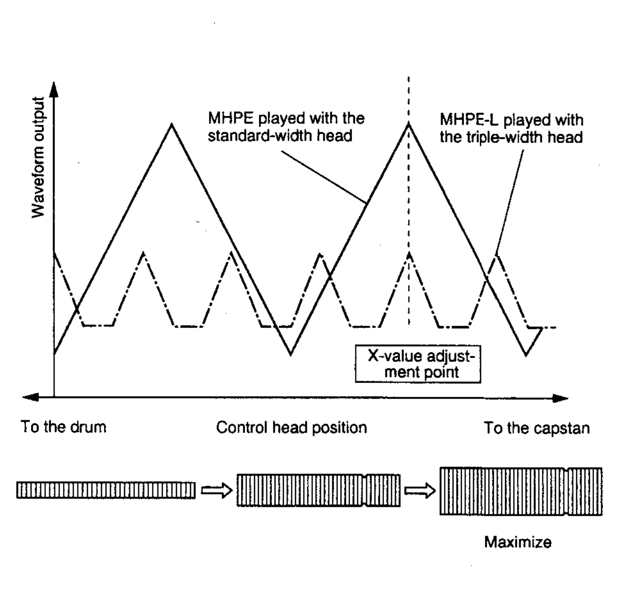


Fig. 2-3-7

2.3.4 Checking/Adjustment of the Standard Tracking Preset

Note: *Set the remote control code of the video recorder to A mode.*
(The unit set in B mode does not accept the remote control code of the presetting unit.)

(1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
(2) Playing the alignment tape MHPE-L and observing the FM waveform, make sure that the auto tracking operation is complete.
(3) Press the "D" button of the presetting unit twice.
(4) Make sure that the MHPE-L is not ejected.
(5) If ejected, again perform the phase (X-value) adjustment of the audio control head.

2.3.5 Checking/Adjustment of the Tension Pole

(1) Check the back tension cassette gauge (PUJ48076-2) to make sure that the indicator points to 25 - 51 gf•cm.
(2) If the indicated value is outside this range, carry out the following adjustment steps.
  1) Select the mechanism servicing mode. (See 1.5 MECHANISM SERVICE MODE.)
  2) While in the Play mode, turn the adjustment pin with a straight-slot screwdriver while taking care not to touch the 2.5 mm dia. pole. (See Fig.2-3-8.)

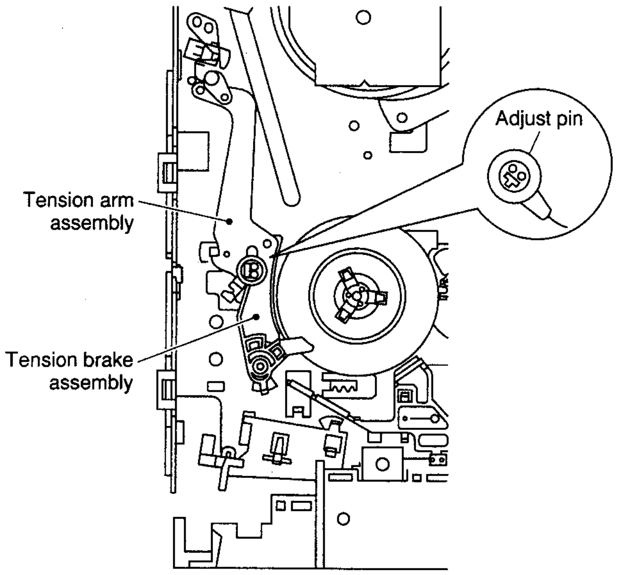


Fig. 2-3-8

2.3.6 Adjustment of the Tension Stud

(1) Adjust so that the left side of the tension stud is on the extension of the notch line of the main deck. (See Fig. 2-3-9.)

Note: *Adjustment is not usually necessary for the tension stud. Perform this adjustment only when it is out of position.*

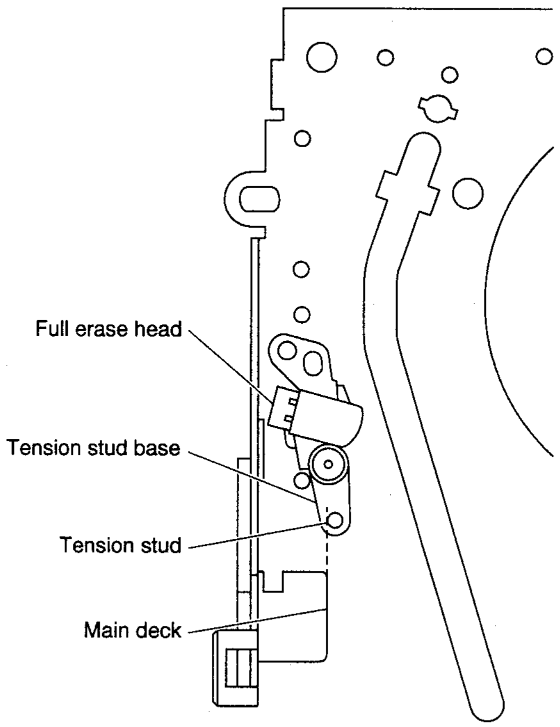


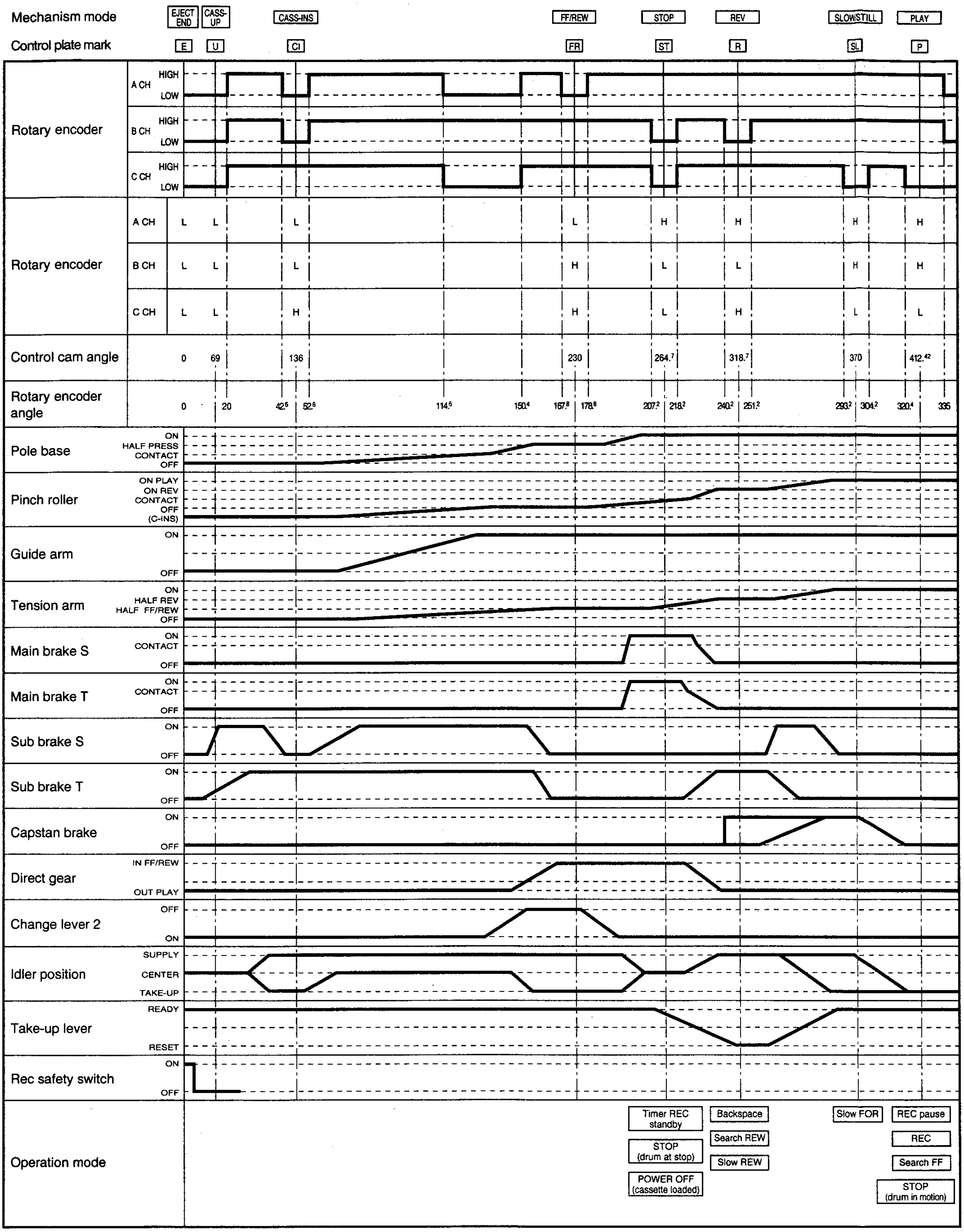
Fig. 2-3-9

2.3.7 Main Brake Torque Adjustment

Note: *Adjustment of the main brake torque is required after the adjustment pin has been removed or the main brake assembly or the reel disk on the supply or take-up side have been replaced, removed or attached.*

(1) Rotate the pulley of the loading motor by hand to align the mark ▼ on the loading arm gear shaft with the ST marking on the control plate (i.e. set to the STOP mode position).
(2) Insert a torque gauge (PUJ48075-2) into the reel disk on the side to be played, hold the torque gauge lightly, rotate it clockwise when measuring the supply side torque or counterclockwise when measuring the take-up side torque, and read the value indicated at the moment the reel disk starts to slip.
(3) Make sure that the main brake torque values on the supply and take-up sides are both between $23.^{5}$ — $78.^{4} \times 10^{-3}$ N•m (240 — 800 gf•cm). If the value is outside the specified range, adjust to the specified value by rotating the adjustment pin.
If an adjustment by using the adjustment pin is not possible, replace the main brake assembly.

Mechanism Timing Chart



SECTION 3
ELECTRICAL ADJUSTMENT

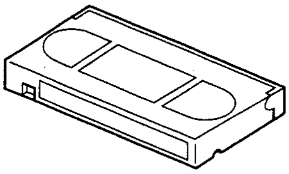
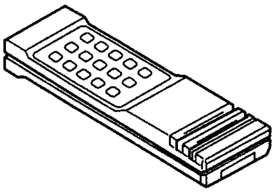
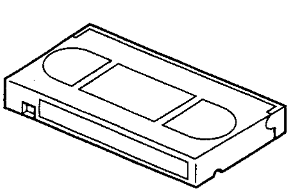
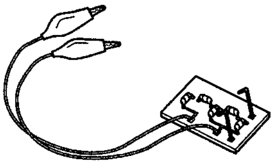
3.1 PRECAUTION

Electrical adjustment are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also do not attempt these adjustments unless the proper equipments is available.

3.1.1 Required test equipment

① Colour television or monitor
② Oscilloscope: wide-band,dual-trace,triggered delayed sweep
③ Frequency counter
④ Signal generator: RF/IF sweep/marker
⑤ Signal generator: PAL colour bar, stairstep
⑥ Recording tape (VHS tape/S-VHS tape)
⑦ Digit-key remote controller(provided)

3.1.2 Required adjustment tools

Alignment tape (SP, stairstep) MHPE	Presetting unit PTU94008
	
Alignment tape (S-VHS, SP/LP, colour bar) MH-2H	LPF PTU93006
	

3.1.3 Colour bar signal,colour bar pattern

- PAL colour bar signal

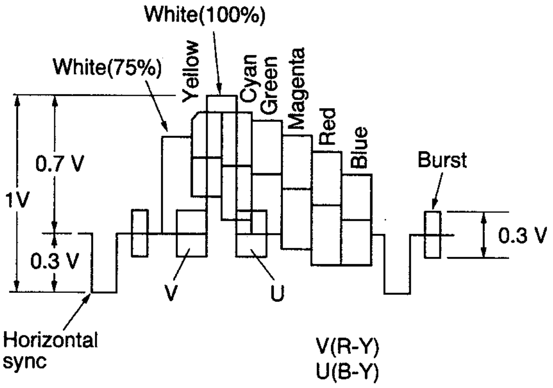

White(100%)
White(75%)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst
0.7 V
1V
0.3 V
0.3 V
V
U
Horizontal sync
V(R-Y)
U(B-Y)

Fig.3-1-1 PAL colour bar signal waveform

- PAL colour bar pattern

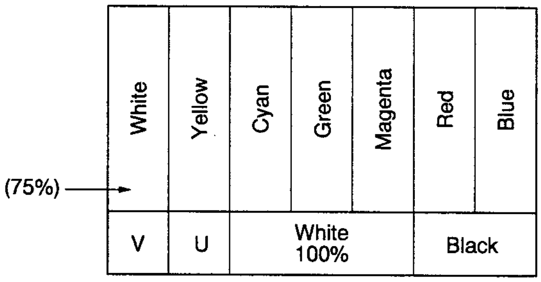

White
Yellow
Cyan
Green
Magenta
Red
Blue
(75%)
V
U
White 100%
Black

Fig.3-1-2 PAL colour bar pattern

Note:

*The system control circuit of this model has an automatic recognition about the ON-OFF control of the **DOCTOR SYSTEM.***

3.2 SERVO CIRCUIT

Notes: • *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*
• *Set the VCR to the mode A by the remote controller.*

3.2.1 PB switching point

Signal	• Alignment tape [MHPE], Stairstep
Mode	• PB
Equipment	• Oscilloscope
Measurement point	• VIDEO OUT TERMINAL
Trigger slope (-)	• TP111(D.FF)
Adjustment tool	• Presetting unit [PTU94008]
Specification	• 7.5 ± 0.5H

Note: • *Use only the "O" button, depressing other buttons during adjustment may cause adjustment errors.*

(1) Playback the stairstep signal of the alignment tape.
(2) Connect an oscilloscope to VIDEO OUT TERMINAL and TP111 (negative slope), and then observe VIDEO OUT TERMINAL.
(3) Press the "O" button of the presetting unit.
(4) The adjustment is performed automatically.
Once the adjustment is performed, the VCR will go into the STOP mode.
(5) Playback the alignment tape again, confirm the switching point (See Fig. 3-2-2).

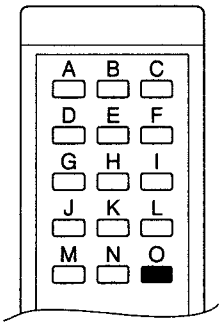


Fig. 3-2-1 Presetting unit

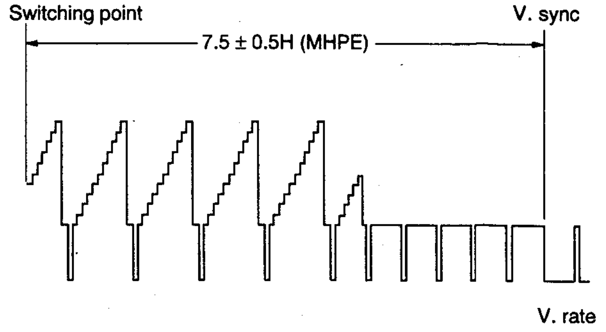


Fig. 3-2-2 PB switching point

3.2.2 Slow tracking preset

Signal	• Tuner or colour bar
Mode	• SP/LP : REC → PB(SLOW) • S-VHS
Equipment	• TV-Monitor
Adjustment tool	• Presetting unit (PTU94008]
Specification	• Minimum noise

Note: • *Use only the "B" and "C" buttons, depressing other buttons during adjustment may cause adjustment errors.*

(1) Record a colour bar signal in the SP mode.
(2) Playback the recorded signal on the FWD slow mode.
(3) Set the tracking control to the centre position by simultaneously pressing the CH "+" and "−" buttons.
(4) Observe the display on the TV monitor and adjust for optimum noise condition (best tracking) by depressing the "B " or "C" buttons of the presetting unit.
(5) Depress the STOP button.
(6) Confirm that the bar noise is not visible on the TV monitor in the slow mode.
(7) Repeat steps (2) to (6) in the REV slow mode.
(8) Repeat steps (1) to (7) in the LP mode.

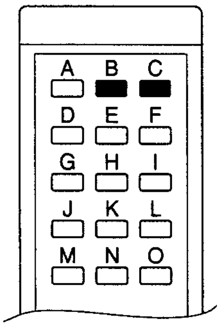


Fig. 3-2-3 Presetting unit

3.3 VIDEO CIRCUIT

Notes:

- *Unless otherwise specified,all measurement points and adjustment parts are located on the MAIN BOARD.*
- *VIDEO circuit adjustments are performed by the EVR system by use of the presetting unit and digit-key remote controller.*
- *S-INPUT means Y/C separated video signal in the chart.*
- *Set the VCR to the mode A by the remote controller.*
- *Unless otherwise specified, set the VCR to the following mode.*

B.E.S.T	OFF
PICTURE CONTROL	NORMAL

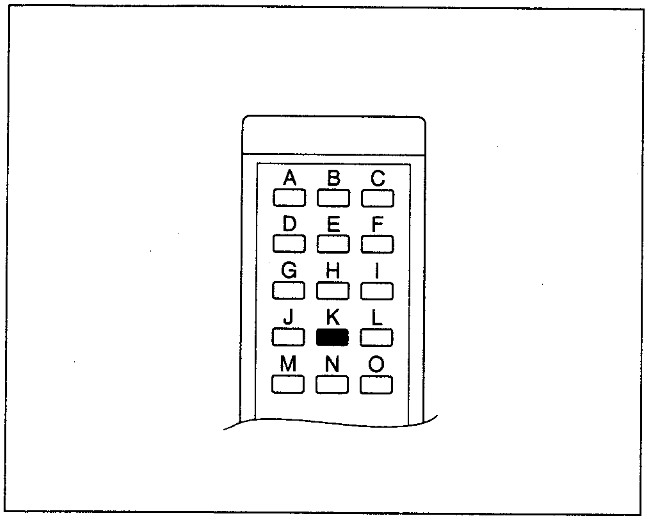


Fig. 3-3-1 Presetting unit

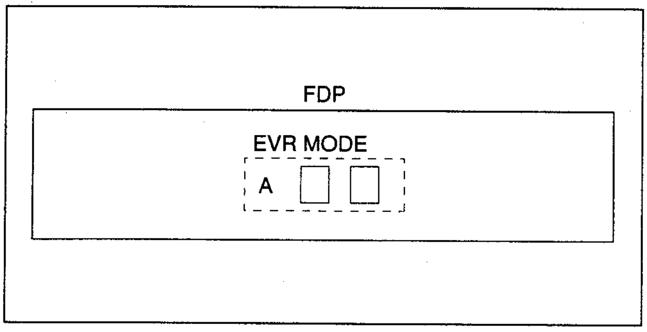


Fig. 3-3-2 EVR mode

3.3.1 EE Y level

Signal	• Colour bar
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.05 Vp-p (terminated)

(1) Connect an oscilloscope to Y OUT TERMINAL.
(2) Set the EVR mode by pressing the "K" button of the presetting unit.
(3) Set "A : 11" by twice pressing 1 button of the remote controller.
(4) Adjust the CH "+" or "–" buttons for 1.00 ± 0.05 Vp-p. (See Fig. 3-3-3.)
(5) Set the normal VCR mode by pressing the "K" button of the presetting unit again so adjustment data is memorized.

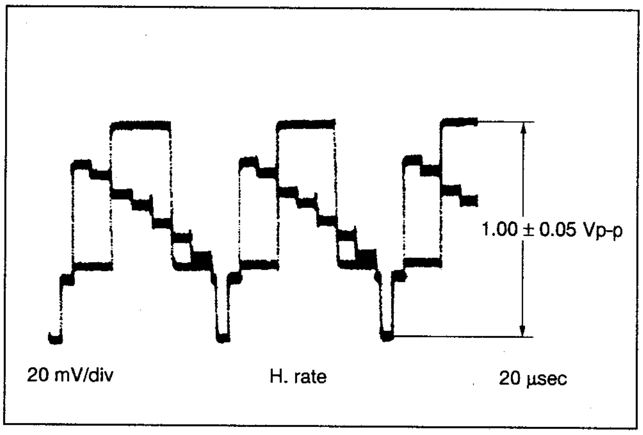


Fig. 3-3-3 EE Y level

3.3.2 SP/LP REC colour level

Signal	• Alignment tape [MH-2H] • Colour bar
Mode	• PB • REC → PB : SP/LP • S-VHS
Equipment	• Oscilloscope
Measurement point	• PB COLOUR
Trigger slope (–)	• TP111 (D.FF)
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller • LPF fixture [PTU93006]
EVR mode	• A : 2
Specification	• "B" x 150 ± 5% : SP • "B" x 110 ± 5% : LP

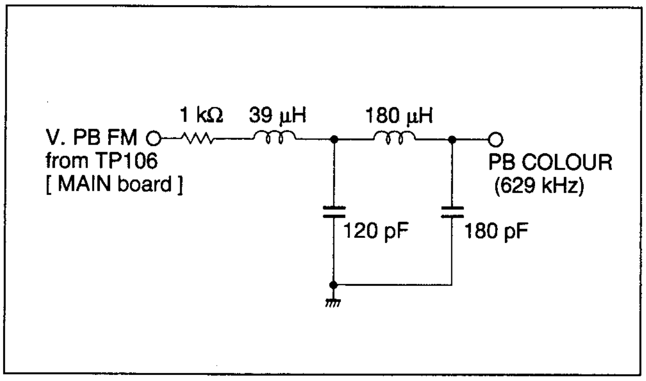


Fig. 3-3-4 LPF

(1) Connect an oscilloscope to PB COLOUR of a LPF (refer to Fig. 3-3-4) and TP111 (negative slope) on the MAIN board.
(2) Playback the SP colour bar signal of the MH-2H alignment tape.
(3) Adjust by pressing the CH "+" or "–" buttons of the Front panel for maximum level of the color waveform and make a note of the higher colour level "B".
(4) Press the STOP/EJECT button and eject the MH-2H alignment tape.
(5) Set the EVR mode by pressing the "K" button of the presetting unit.
(6) Set "A : 2" by pressing 2 button of the remote controller.
(7) Before recording, adjust the CH "+" or "–" buttons of the remote controller so that the higher level channel becomes 150 ± 5% : SP (110 ± 5% : LP) of the note "B" level during playback as shown in Fig. 3-3-5.
(8) Record a colour bar signal in the SP (LP) mode, and playback the recorded colour bar signal.
(9) Set the normal VCR mode by pressing the "K" button again so adjustment data is memorized.

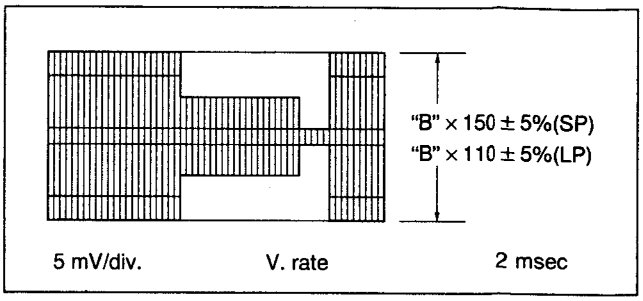


Fig. 3-3-5 REC colour level

3.3.3 PB Y level (S-VHS/VHS)

Signal	• Colour bar
Mode	• REC → PB : SP • S-VHS/VHS
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.05 Vp-p (terminated)

(1) Connect an oscilloscope to Y OUT TERMINAL.
(2) Set the EVR mode by pressing the "K" button of the presetting unit.
(3) Set "A : 11" by twice pressing 1 button of the remote controller.
(4) Record a colour bar signal in the S-VHS mode, and playback the recorded colour bar signal.
(5) Adjust the CH "+" or "–" buttons for 1.00 ± 0.05 Vp-p as shown in Fig. 3-3-6.
(6) Set the normal VCR mode by pressing the "K" button of the presetting unit again so adjustment data is memorized.
(7) Repeat steps (1) to (6) in the VHS mode.

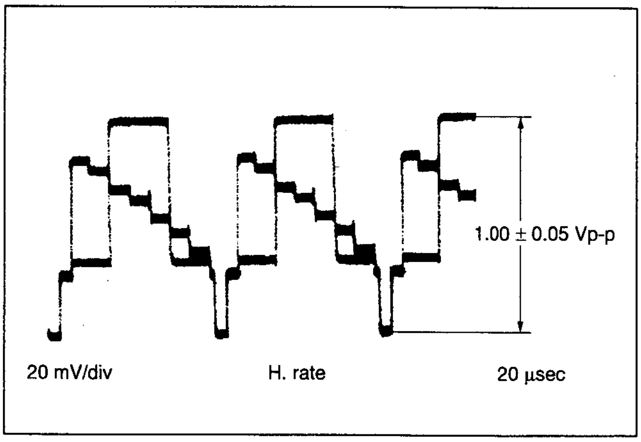


Fig. 3-3-6 PB Y level

3.3.4 S-VHS VIDEO EQ

Signal	• S.INPUT • Video sweep
Mode	• REC → PB : SP/LP • S-VHS • Picture Control REC : Normal PB : Edit
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Trigger slope (–)	• TP111 (D.FF)
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 3
Specification	• 3.6 ± 0.4 scale : SP • 3.2 ± 0.4 scale : LP

(1) Connect an oscilloscope to Y OUT TERMINAL and TP111 (negative slope).
(2) Record a video sweep signal in the S-VHS SP mode, then play it back.
(3) Set the EVR mode by pressing the "K" button of the presetting unit.
(4) Set "A : 3" by pressing 3 button of the remote controller.
(5) When assuming the 100 KHz sweep signal marker on the bigger channel is four scales on the oscilloscope, adjust the CH "+" or "–" buttons on the front panel or the Digit-key remote controller so that the 3 MHz is set at 3.6 ± 0.4 scale (–1 ± 1.0 dB) while observing Y OUT of the S output. (See Fig. 3-3-7.)
(6) Set the normal VCR mode by pressing the "K" button of the presetting unit again so adjustment data is memorized.
(7) Carry out the step (3) and (4) in the S-VHS LP mode.
(8) When assuming the 100 kHz sweep signal marker on the bigger channel is four scales on the oscilloscope, adjust the CH "+" or "–" buttons on the front panel or the Digit-key remote controller so that the 3 MHz is set at 3.2 ± 0.4 scale (–2 ± 1.0 dB) while observing Y OUT of the S output. (See Fig. 3-3-7.)

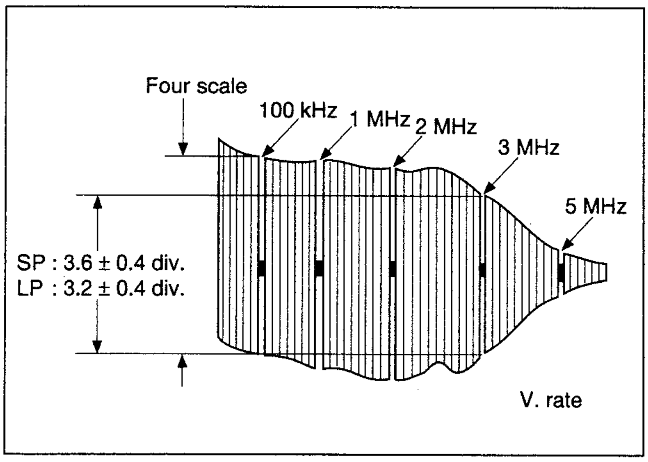


Fig. 3-3-7 S-VHS VIDEO EQ

3.3.5 D/A level

Signal	• Colour bar
Mode	• EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• CN1003-3 pin (Y OUT) [2D SVHS board]
Adjustment part	• VR1201 (D/A LEVEL) [2D SVHS board]
Specification (NOTE)	• 2.05 Vp-p (REFERENCE VALUE)

(1) Connect the oscilloscope to the CN1003-3 pin(Y OUT) on the 2D SVHS board.
(2) Confirm the Y level value during external S input.
(3) Switch the input signal to the external input, then adjust the VR1201 on the 2D SVHS board so that the Y level value becomes the same level value which was confirmed at the step (2).

Note: • *The adjusted value of 2.05 Vp-p is a reference value which should be obtained during external S input. The value should be adjusted to the one which was confirmed at step (2).*

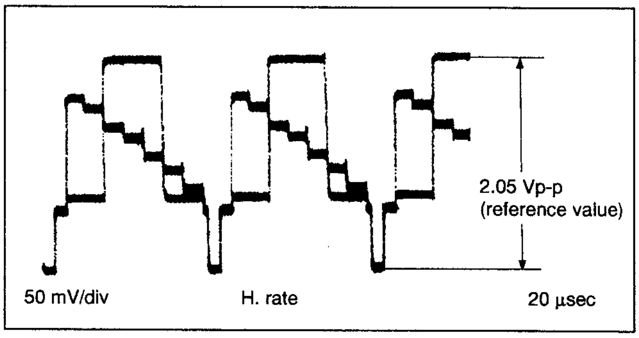


Fig. 3-3-8 D/A LEVEL

3.3.6 Pilot burst level

Signal	• Colour bar
Mode	• EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP1001 (FSC PHASE) [2D SVHS board]
Adjustment part	• VR1002 (P. BURST LEVEL) [2D SVHS board]
Specification	• "B" x 110 ± 10%

(1) Connect the oscilloscope to the TP1001 (FSC PHASE) on the 2D SVHS board.
(2) Load an S-VHS tape then set the unit to the S-VHS EE mode.
(3) Adjust the VR1002 of the 2D SVHS so that the pilot burst level becomes "B" x 110 ±10% against the value of the burst level "B".

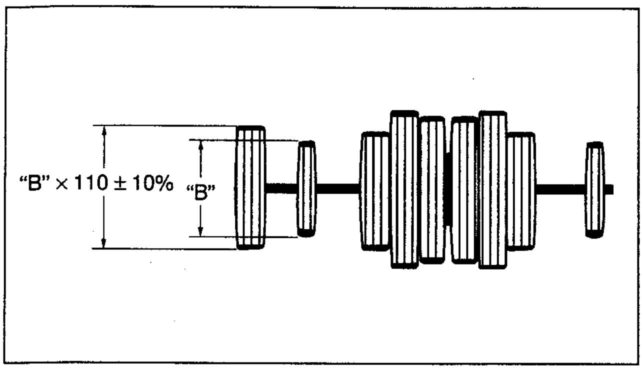


Fig. 3-3-9 PILOT BURST LEVEL

3.3.7 Auto picture

Signal	• Monoscope
Mode	• REC → PB : SP/LP • S-VHS
Adjustment tool	• Presetting unit [PTU94008]
Specification	• STOP mode

(1) Record a monoscope signal in the SP mode.
(2) Playback the recorded signal.
(3) Press the "L" button of the presetting unit during playback.
(4) Confirm that the VCR will go into the STOP mode.
(5) Repeat steps (2) to (4) in the LP mode.

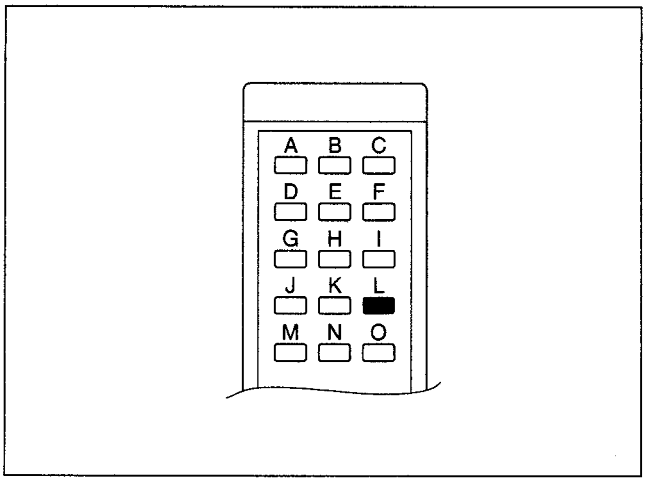


Fig. 3-3-10 Presetting unit

3.4 AUDIO CIRCUIT

Notes: • *Unless otherwise specified, all measurement point and adjustment parts are located on the MAIN BOARD.*
• *This adjustment should be done after the video circuit SP and LP REC colour level are adjusted.*
• *GND(Ground) should be taken from the tuner board shield.*

3.4.1 REC FM level

Signal	• AUX • VIDEO : Colour bar • AUDIO : No signal
Mode	• REC → PB : LP • S-VHS • B.E.S.T : OFF
Equipment	• Oscilloscope
Measurement point	• TP2253 (A. PB FM)
Trigger slope (–)	• TP111 (D. FF)
Adjustment part	• VR2251 (A. REC. FM)
Specification	• 600 ± 100 mVp-p

(1) Connect an oscilloscope to TP2253.
(2) Record a colour bar signal without an audio signal in the S-VHS LP mode then playback.
(3) Adjust VR2251 for 600 ± 100 mVp-p playback level of higher channel level before recording.
(4) Confirm that the lower channel level is more than 450 mVp-p.

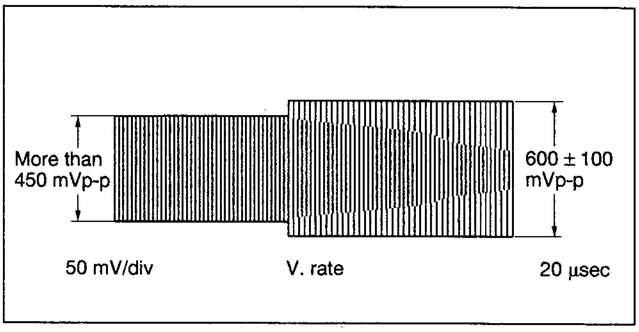


Fig. 3-4-1 Audio REC FM level

3.5 SYSCON CIRCUIT

Notes: • *Unless otherwise specified,all measurement points and adjustment parts are located on the MAIN BOARD.*
• *When perform this adjustment,remove the MECHANISM assembly.*

3.5.1 Timer clock

Signal	• No signal
Mode	• EE
Equipment	• Frequency counter
Measurement point	• IC3001-PIN61
Adjustment part	• C3025 (TIMER CLOCK)
Specification	• 1024.008 ± 0.001 Hz [976.5549 ± 0.0010 μsec.]

(1) Connect the frequency counter to IC3001-PIN61.
(2) Connect the short wire between IC3001-PIN24 and Vcc(5V).
(3) Short the leads of capacitor C3026 once in order to reset IC3001.
(4) Disconnect the short wire between IC3001-PIN24 and Vcc then connect it again.
(5) Adjust C3025 trimmer capacitor so that the output from IC3001-PIN61 falls within 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 μsec.) range.

3.6 ON SCREEN CIRCUIT

Note: • *Set the VCR to the mode A by the remote controller.*

3.6.1 Character position

Signal	• No signal
Mode	• EE
Equipment	• TV-monitor
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
Specification	• Character centre

Note: • *Use only the "H" button, depressing other buttons during adjustment may cause adjustment errors.*

(1) Press the MENU button and display the on screen character.
(2) Observe the TV-monitor and centre position of character by pressing the "H" button of the presetting unit.

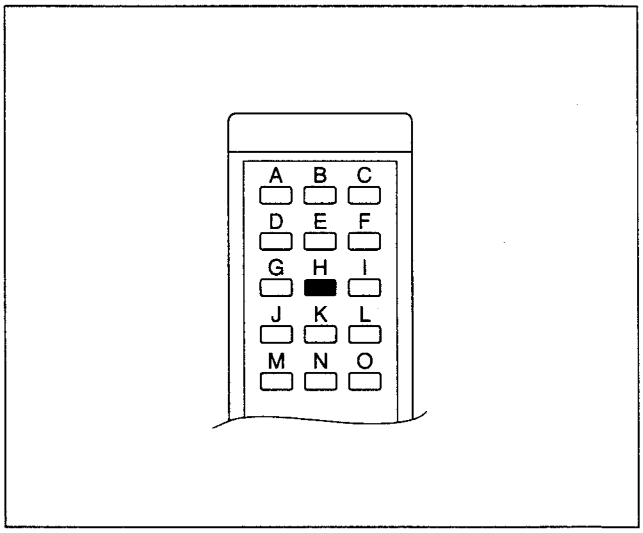


Fig.3-6-1 Presetting unit

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

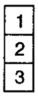
Unless otherwise specified.

1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

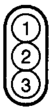
2. Indications of control voltage

AUX : Active at high
$\overline{\text{AUX}}$ or AUX(L) : Active at low

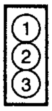
3. Interpreting Connector indications



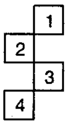
Removable connector



Wire soldered directly on board



Non-removable Board connector

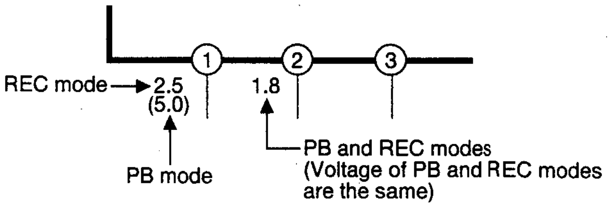


Board to Board

⟶
⟵
⟷ } Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

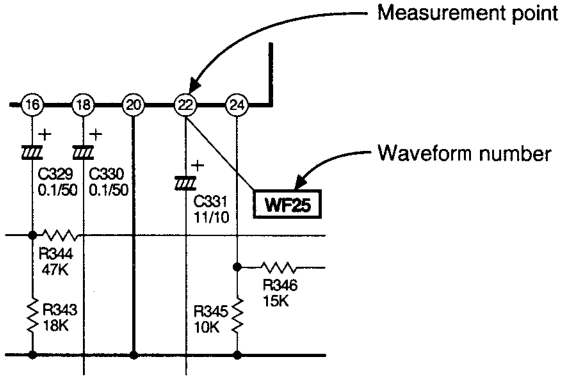
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.


①
②
③
REC mode
2.5
(5.0)
1.8
PB mode
PB and REC modes
(Voltage of PB and REC modes are the same)

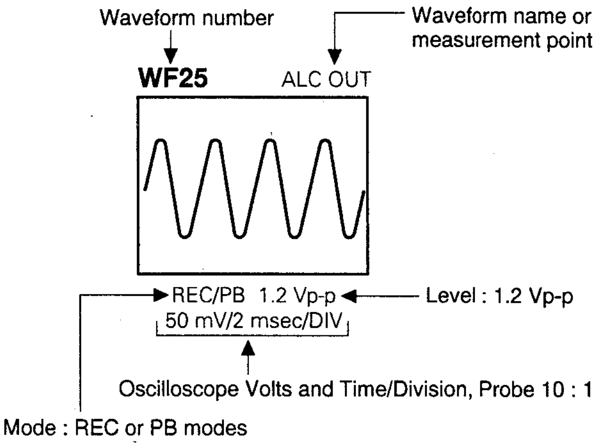
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.

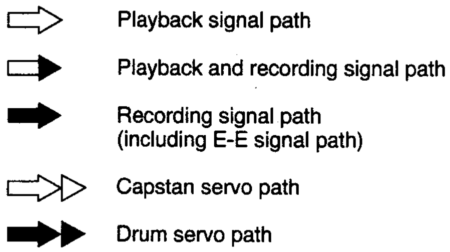

Measurement point
⑯
⑱
⑳
㉒
㉔
C329
0.1/50
C330
0.1/50
C331
11/10
Waveform number
WF25
R344
47K
R343
18K
R345
10K
R346
15K

5) Waveform indications

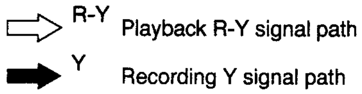

Waveform number
Waveform name or measurement point
WF25
ALC OUT
REC/PB 1.2 Vp-p
Level : 1.2 Vp-p
50 mV/2 msec/DIV
Oscilloscope Volts and Time/Division, Probe 10 : 1
Mode : REC or PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.

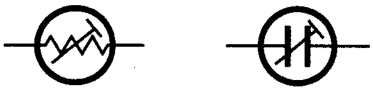

Playback signal path
Playback and recording signal path
Recording signal path
(including E-E signal path)
Capstan servo path
Drum servo path

(Example)


R-Y
Playback R-Y signal path
Y
Recording Y signal path

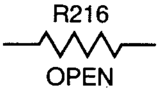
7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



CIRCUIT BOARD NOTES

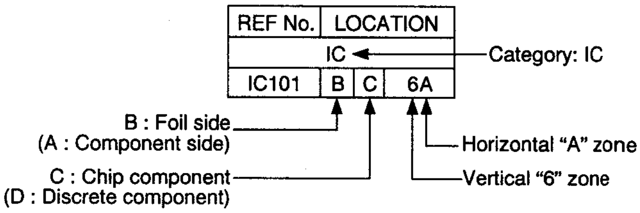
1. Foil and Component sides

1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.

2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

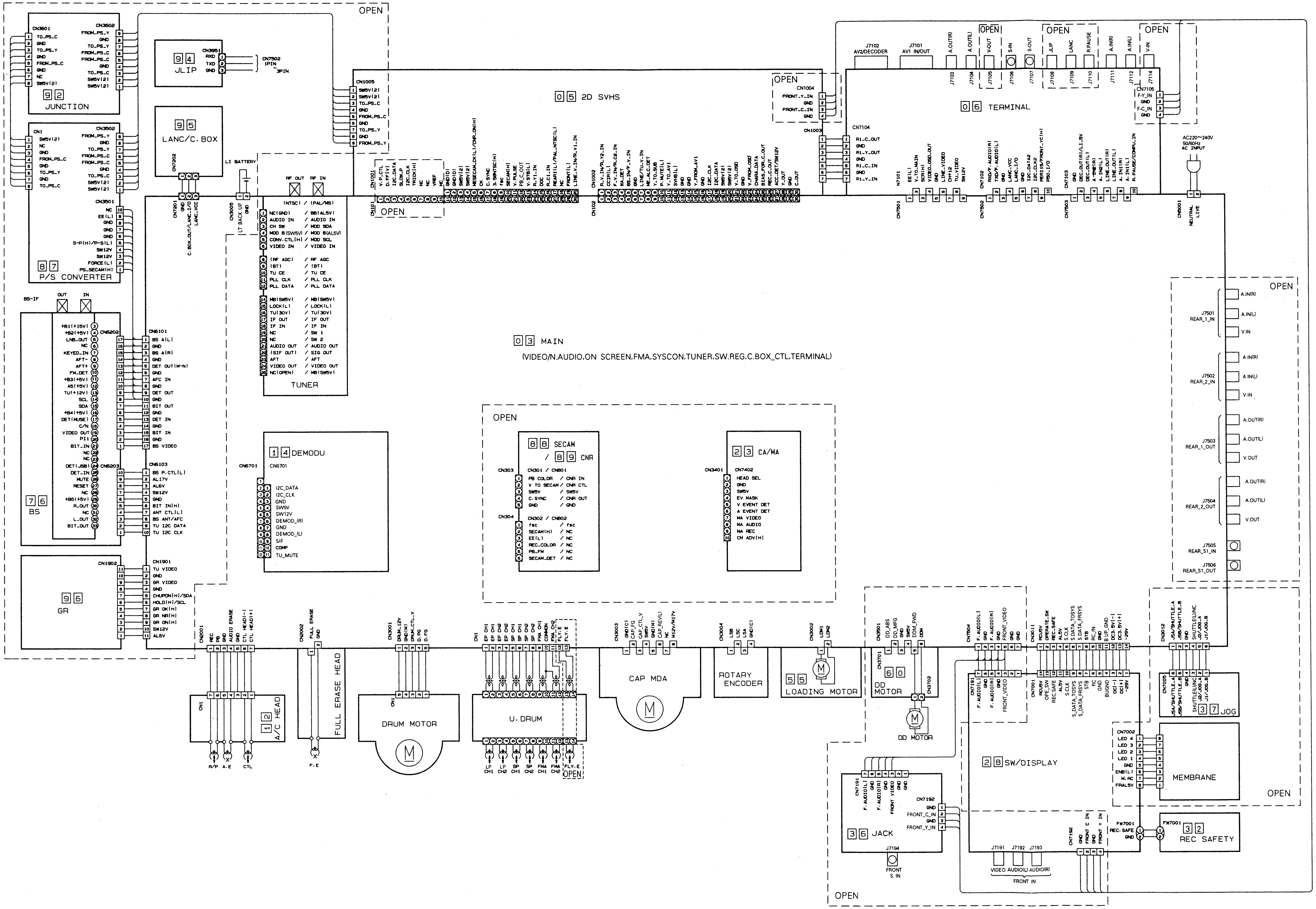
Parts location are indicated by guide scale on the circuit board.


REF No.
LOCATION
IC
Category: IC
IC101
B
C
6A
B : Foil side
(A : Component side)
C : Chip component
(D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

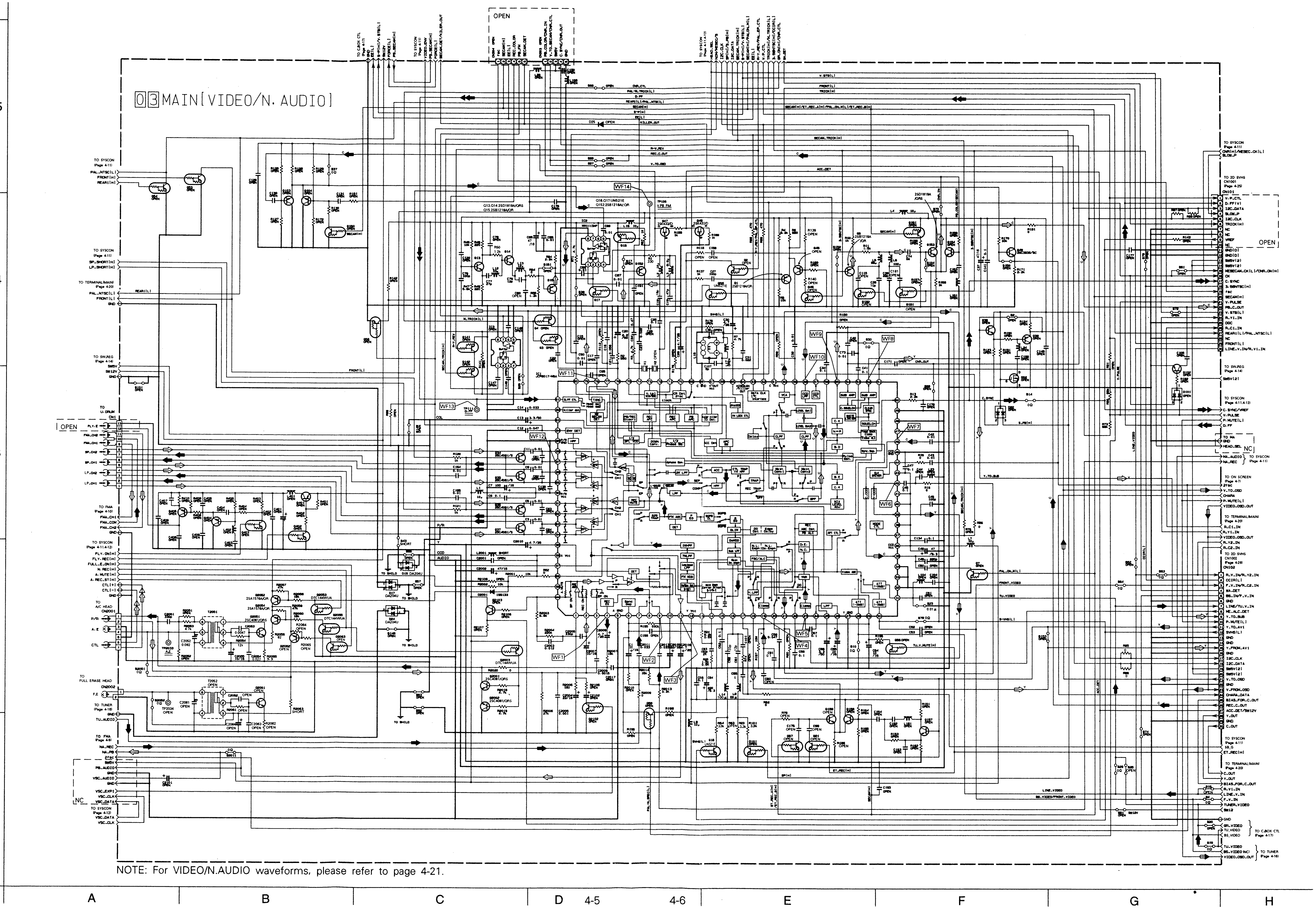
4.1 BOARD INTERCONNECTIONS



OPEN
92 JUNCTION
94 JLIP
95 LANC/C.BOX
87 P/S CONVERTER
05 2D SVHS
06 TERMINAL
03 MAIN
(VIDEO/N.AUDIO.ON SCREEN.FMA.SYSCON.TUNER.SW.REG.C.BOX_CTL.TERMINAL)
TUNER
76 BS
96 GR
14 DEMODU
88 SECAM / 89 CNR
23 CA/MA
12 A/C HEAD
FULL ERASE HEAD
DRUM MOTOR
U. DRUM
CAP MDA
ROTARY ENCODER
55 LOADING MOTOR
60 DD MOTOR
DD MOTOR
28 SW/DISPLAY
37 JOG
MEMBRANE
36 JACK
32 REC SAFETY
AC220~240V 50/60Hz AC INPUT
LI BATTERY
FRONT IN

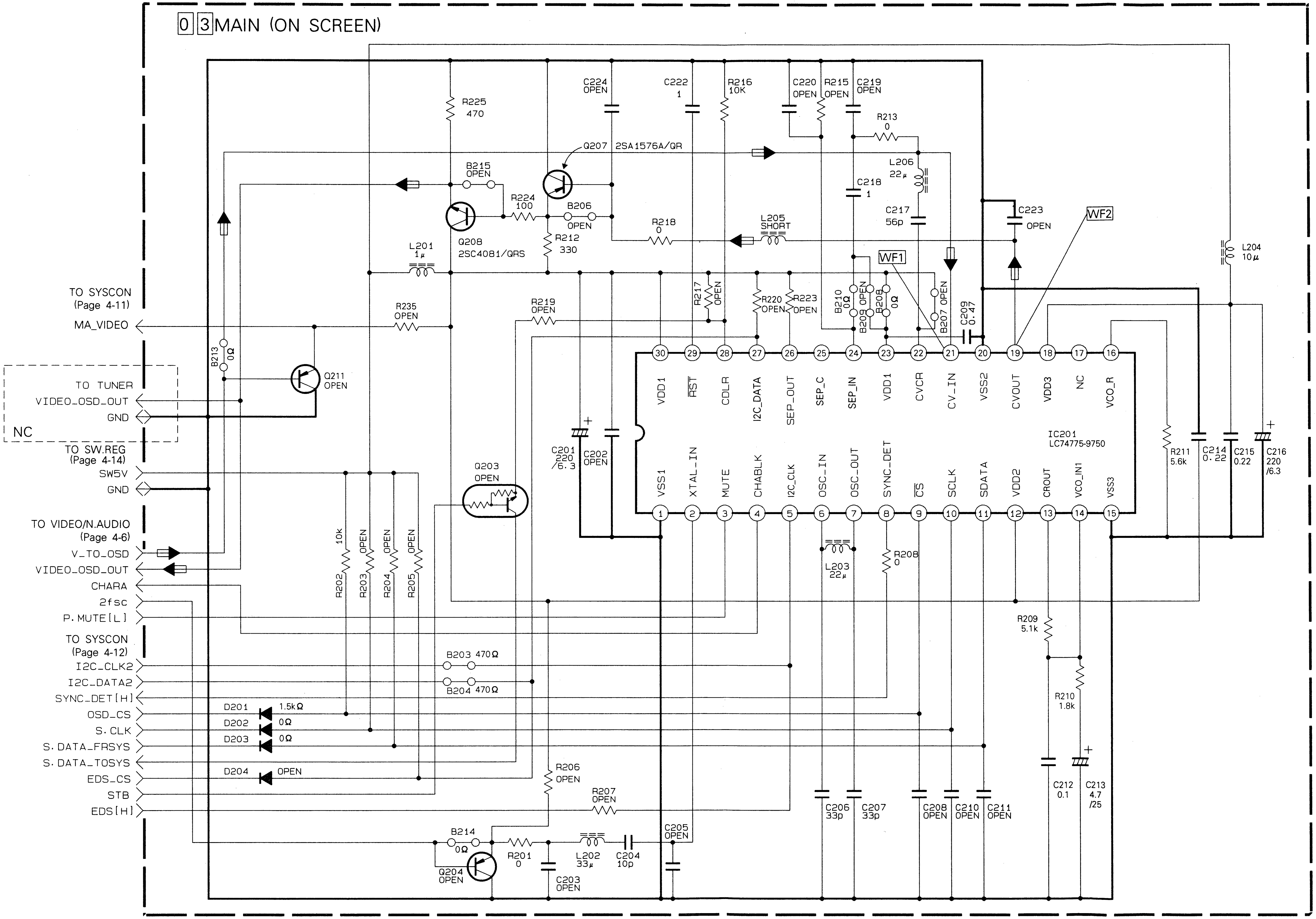
NO	NAME
5 5	LOADING MOTOR
3 2	REC SAFETY
2 8	SW/DISPLAY
1 4	DEMODU
1 2	A/C HEAD
0 6	TERMINAL
0 5	2D SVHS
0 3	MAIN

4.2 VIDEO/N.AUDIO SCHEMATIC DIAGRAM


03 MAIN[VIDEO/N.AUDIO]
OPEN
NC
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
WF10
WF11
WF12
WF13
WF14
TO SYSCON
TO SW.REG
TO FMA
TO A/C HEAD
TO FULL ERASE HEAD
TO TUNER
TO TERMINAL(MAIN)
TO 2D SVHS
TO ON SCREEN
TO C.BOX CTL
1
2
3
4
5
A
B
C
D
E
F
G
H

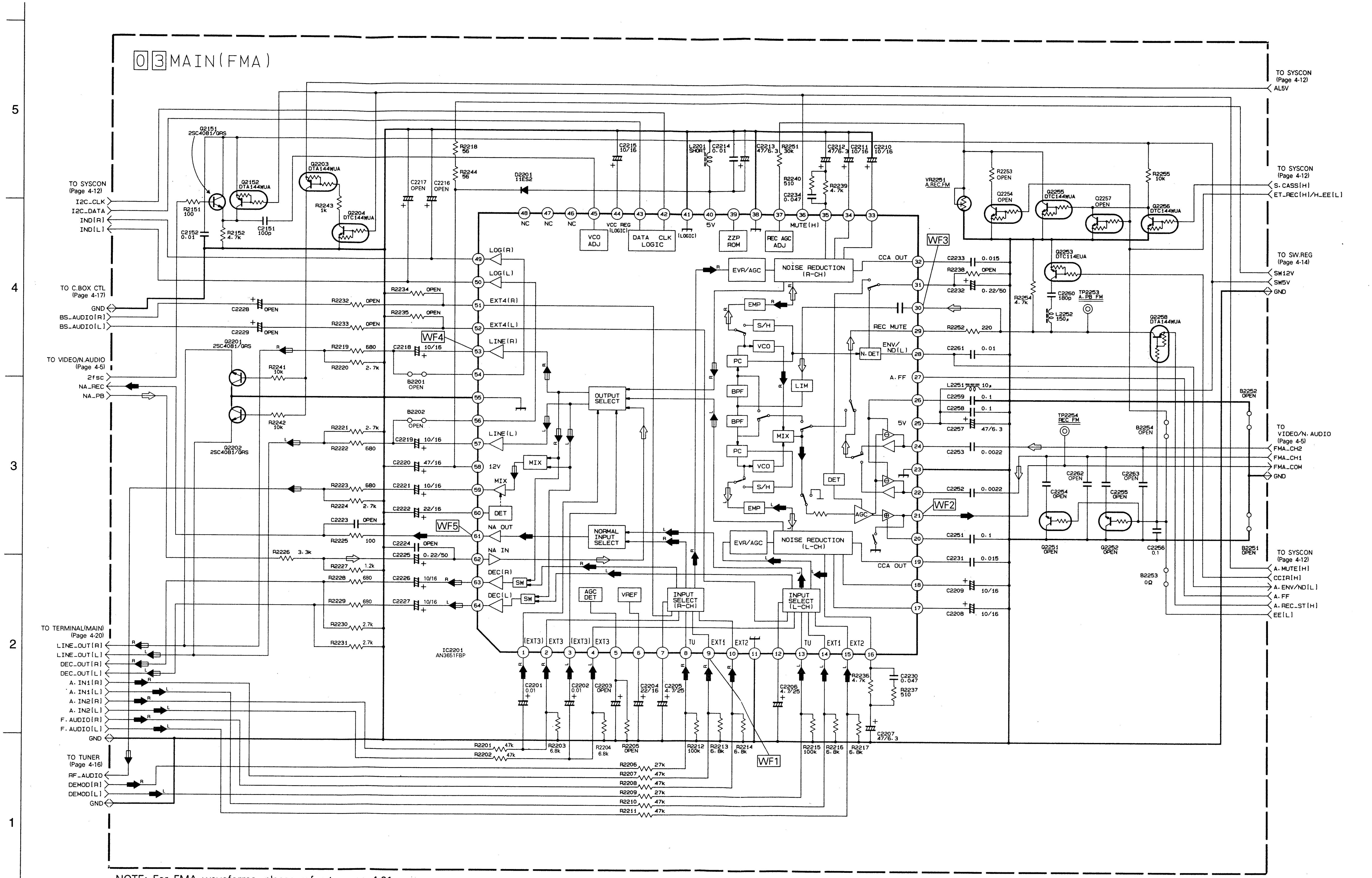
NOTE: For VIDEO/N.AUDIO waveforms, please refer to page 4-21.

4.3 ON SCREEN SCHEMATIC DIAGRAM


03 MAIN (ON SCREEN)
TO SYSCON (Page 4-11)
MA_VIDEO
TO TUNER
VIDEO_OSD_OUT
GND
NC
TO SW.REG (Page 4-14)
SW5V
GND
TO VIDEO/N.AUDIO (Page 4-6)
V_TO_OSD
VIDEO_OSD_OUT
CHARA
2fsc
P.MUTE[L]
TO SYSCON (Page 4-12)
I2C_CLK2
I2C_DATA2
SYNC_DET[H]
OSD_CS
S.CLK
S.DATA_FRSYS
S.DATA_TOSYS
EDS_CS
STB
EDS[H]
R225 470
B215 OPEN
Q207 2SA1576A/QR
R224 100
B206 OPEN
Q208 2SC4081/QRS
R212 330
L201 1μ
R235 OPEN
R219 OPEN
B213 0Ω
Q211 OPEN
C224 OPEN
C222 1
R216 10K
C220 OPEN
R215 OPEN
C219 OPEN
R213 0
L206 22μ
C218 1
C217 56p
R218 0
L205 SHORT
C223 OPEN
WF2
WF1
L204 10μ
R217 OPEN
R220 OPEN
R223 OPEN
B210 0Ω
B209 OPEN
B208 0Ω
B207 OPEN
C209 0.47
30 VDD1
29 RST
28 CDLR
27 I2C_DATA
26 SEP_OUT
25 SEP_C
24 SEP_IN
23 VDD1
22 CVCR
21 CV_IN
20 VSS2
19 CVOUT
18 VDD3
17 NC
16 VCO_R
IC201 LC74775-9750
1 VSS1
2 XTAL_IN
3 MUTE
4 CHABLK
5 I2C_CLK
6 OSC_IN
7 OSC_OUT
8 SYNC_DET
9 CS
10 SCLK
11 SDATA
12 VDD2
13 CROUT
14 VCO_IN1
15 VSS3
C201 220 /6.3
C202 OPEN
Q203 OPEN
R202 10k
R203 OPEN
R204 OPEN
R205 OPEN
R211 5.6k
C214 0.22
C215 0.22
C216 220 /6.3
L203 22μ
R208 0
R209 5.1k
R210 1.8k
C212 0.1
C213 4.7 /25
B203 470Ω
B204 470Ω
D201 1.5kΩ
D202 0Ω
D203 0Ω
D204 OPEN
R206 OPEN
R207 OPEN
B214 0Ω
Q204 OPEN
R201 0
C203 OPEN
L202 33μ
C204 10p
C205 OPEN
C206 33p
C207 33p
C208 OPEN
C210 OPEN
C211 OPEN
5
4
3
2
1
A
B
C
D
E
F
G
H

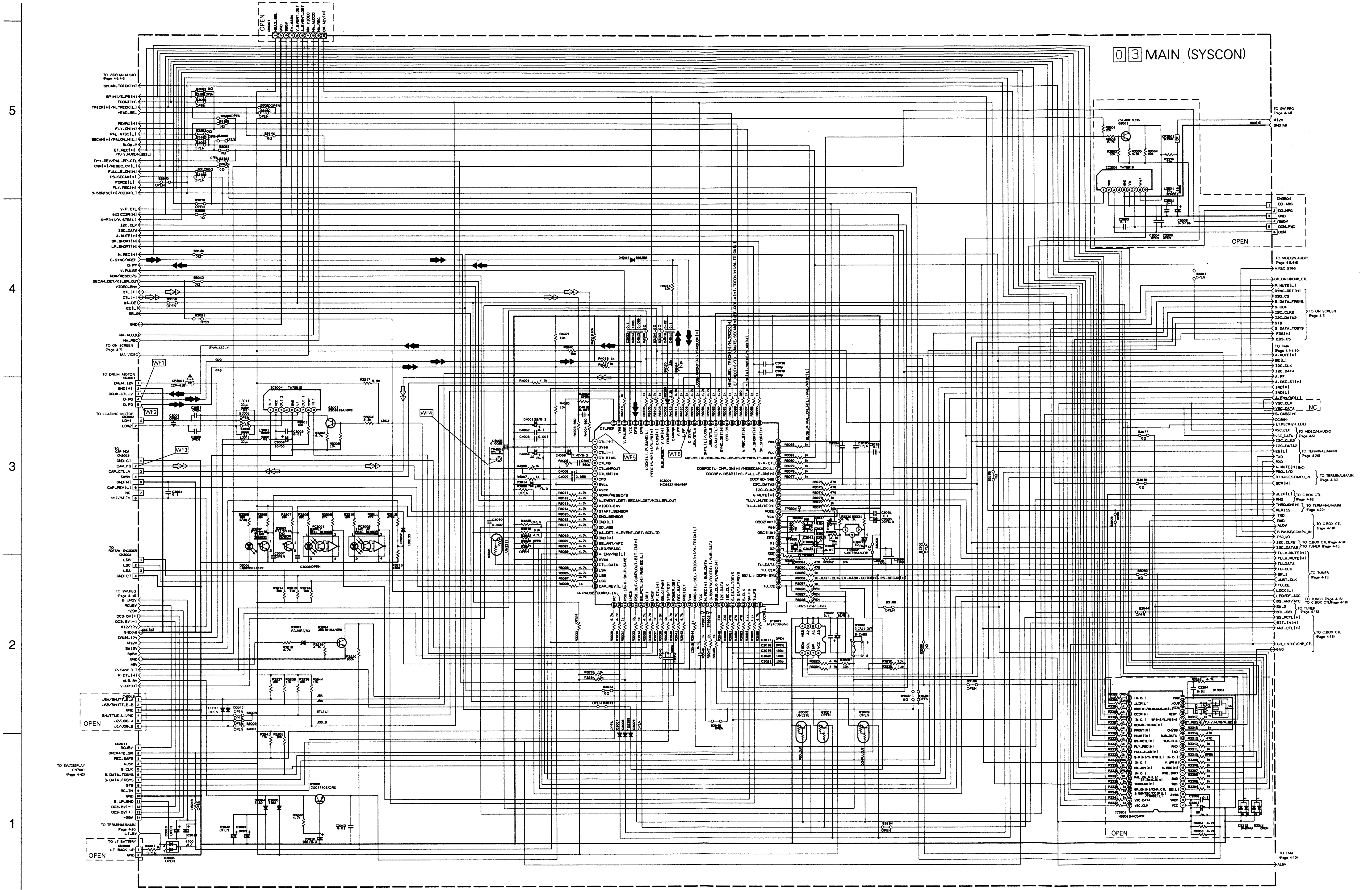
NOTE: For ON SCREEN waveforms, please refer to page 4-21.

4.4 FMA SCHEMATIC DIAGRAM


03 MAIN(FMA)
TO SYSCON (Page 4-12)
I2C_CLK
I2C_DATA
IND[R]
IND[L]
TO C.BOX CTL (Page 4-17)
GND
BS_AUDIO[R]
BS_AUDIO[L]
TO VIDEO/N.AUDIO (Page 4-5)
2fsc
NA_REC
NA_PB
TO TERMINAL(MAIN) (Page 4-20)
LINE_OUT[R]
LINE_OUT[L]
DEC_OUT[R]
DEC_OUT[L]
A.IN1[R]
A.IN1[L]
A.IN2[R]
A.IN2[L]
F.AUDIO[R]
F.AUDIO[L]
GND
TO TUNER (Page 4-16)
RF_AUDIO
DEMOD[R]
DEMOD[L]
GND
TO SYSCON (Page 4-12)
AL5V
TO SYSCON (Page 4-12)
S.CASS[H]
ET_REC[H]/H_EE[L]
TO SW.REG (Page 4-14)
SW12V
SW5V
GND
TO VIDEO/N.AUDIO (Page 4-5)
FMA_CH2
FMA_CH1
FMA_COM
GND
TO SYSCON (Page 4-12)
A.MUTE[H]
CCIR[H]
A.ENV/ND[L]
A.FF
A.REC_ST[H]
EE[L]
IC2201 AN3651FBP
Q2151 2SC4081/QRS
Q2152 DTA144WUA
Q2203 DTA144WUA
Q2204 DTC144WUA
Q2201 2SC4081/QRS
Q2202 2SC4081/QRS
Q2253 DTC114EUA
Q2254 OPEN
Q2255 DTC144WUA
Q2256 DTC144WUA
Q2257 OPEN
Q2258 DTA144WUA
Q2251 OPEN
Q2252 OPEN
D2201 1ES2
VR2251 A.REC.FM
L2201 SHORT
L2251 10μ
L2252 150μ
TP2253 A.PB FM
TP2254 REC FM
WF1
WF2
WF3
WF4
WF5
VCO ADJ
VCC REG (LOGIC)
DATA CLK LOGIC
ZZP ROM
REC AGC ADJ
NOISE REDUCTION (R-CH)
NOISE REDUCTION (L-CH)
EVR/AGC
EMP
S/H
VCO
PC
BPF
LIM
MIX
DET
N.DET
AGC
OUTPUT SELECT
NORMAL INPUT SELECT
AGC DET
VREF
INPUT SELECT (R-CH)
INPUT SELECT (L-CH)
SW
LOG(R)
LOG(L)
EXT4(R)
EXT4(L)
LINE(R)
LINE(L)
12V
NA OUT
NA IN
DEC(R)
DEC(L)
CCA OUT
REC MUTE
ENV/ND(L)
A.FF
5V
MUTE(H)
NC
[EXT3]
EXT3
TU
EXT1
EXT2
R2218 56
R2244 56
R2151 100
R2152 4.7k
C2152 0.01
C2151 100p
R2243 1k
C2217 OPEN
C2216 OPEN
C2215 10/16
C2214 0.01
C2213 47/6.3
R2251 30k
C2212 47/6.3
C2211 10/16
C2210 10/16
R2240 510
C2234 0.047
R2239 4.7k
R2253 OPEN
R2255 10k
C2228 OPEN
C2229 OPEN
R2232 OPEN
R2233 OPEN
R2234 OPEN
R2235 OPEN
R2219 680
R2220 2.7k
C2218 10/16
B2201 OPEN
B2202 OPEN
R2241 10k
R2242 10k
R2221 2.7k
R2222 680
C2219 10/16
C2220 47/16
R2223 680
R2224 2.7k
C2221 10/16
C2222 22/16
C2223 OPEN
R2225 100
C2224 OPEN
C2225 0.22/50
R2226 3.3k
R2227 1.2k
R2228 680
C2226 10/16
R2229 680
C2227 10/16
R2230 2.7k
R2231 2.7k
C2233 0.015
R2238 OPEN
C2232 0.22/50
R2254 4.7k
C2260 180p
R2252 220
C2261 0.01
C2259 0.1
C2258 0.1
C2257 47/6.3
C2253 0.0022
C2262 OPEN
C2263 OPEN
C2254 OPEN
C2255 OPEN
C2252 0.0022
C2251 0.1
C2231 0.015
C2209 10/16
C2208 10/16
C2256 0.1
B2252 OPEN
B2254 OPEN
B2251 OPEN
B2253 0Ω
C2201 0.01
C2202 0.01
C2203 OPEN
C2204 22/16
C2205 4.7/25
C2206 4.7/25
R2236 4.7k
C2230 0.047
R2237 510
C2207 47/6.3
R2201 47k
R2202 47k
R2203 6.8k
R2204 6.8k
R2205 OPEN
R2212 100k
R2213 6.8k
R2214 6.8k
R2215 100k
R2216 6.8k
R2217 6.8k
R2206 27k
R2207 47k
R2208 47k
R2209 27k
R2210 47k
R2211 47k
5
4
3
2
1
A
B
C
D
E
F
G
H

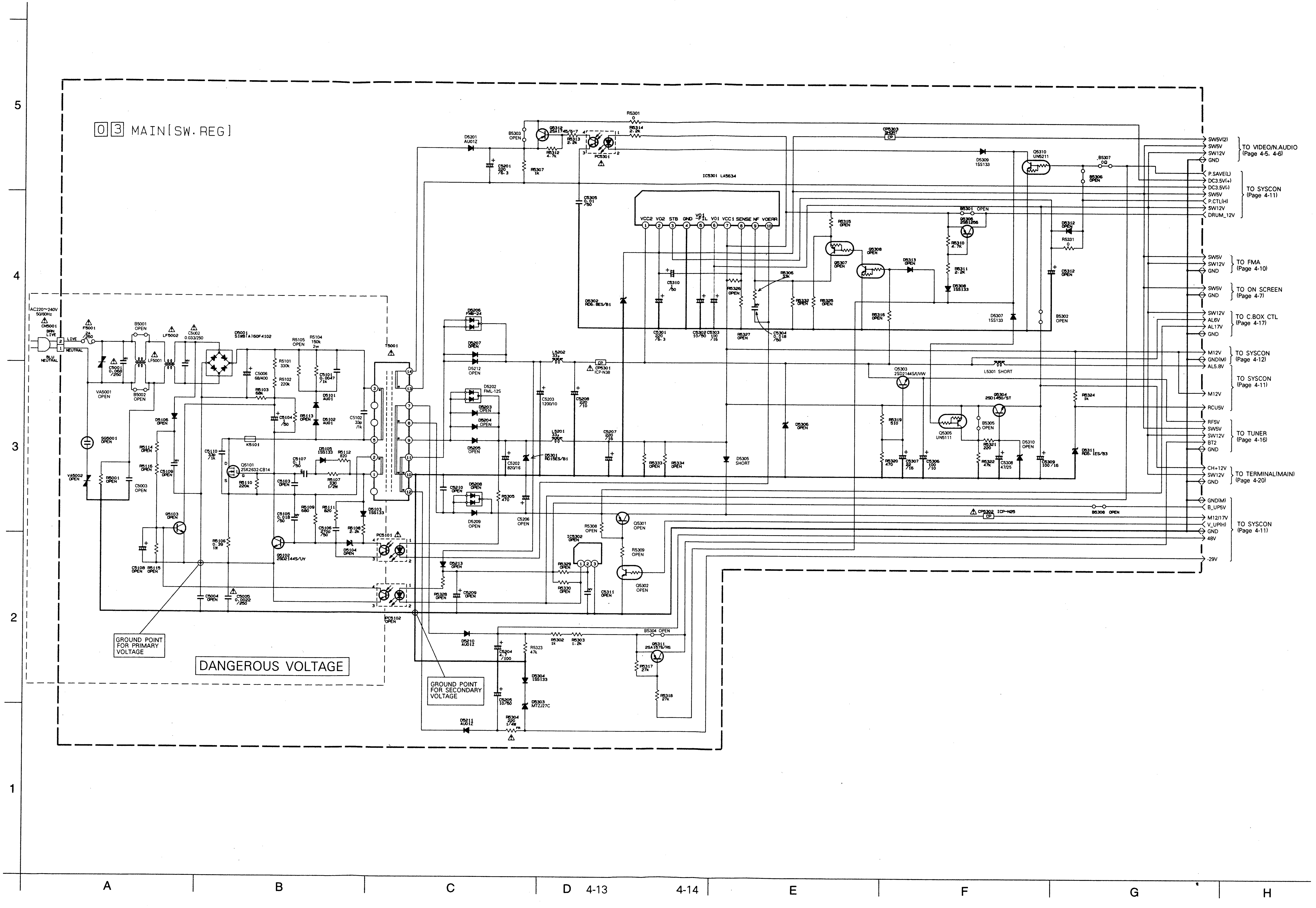
NOTE: For FMA waveforms, please refer to page 4-21.

4.5 SYSTEM CONTROL SCHEMATIC DIAGRAM

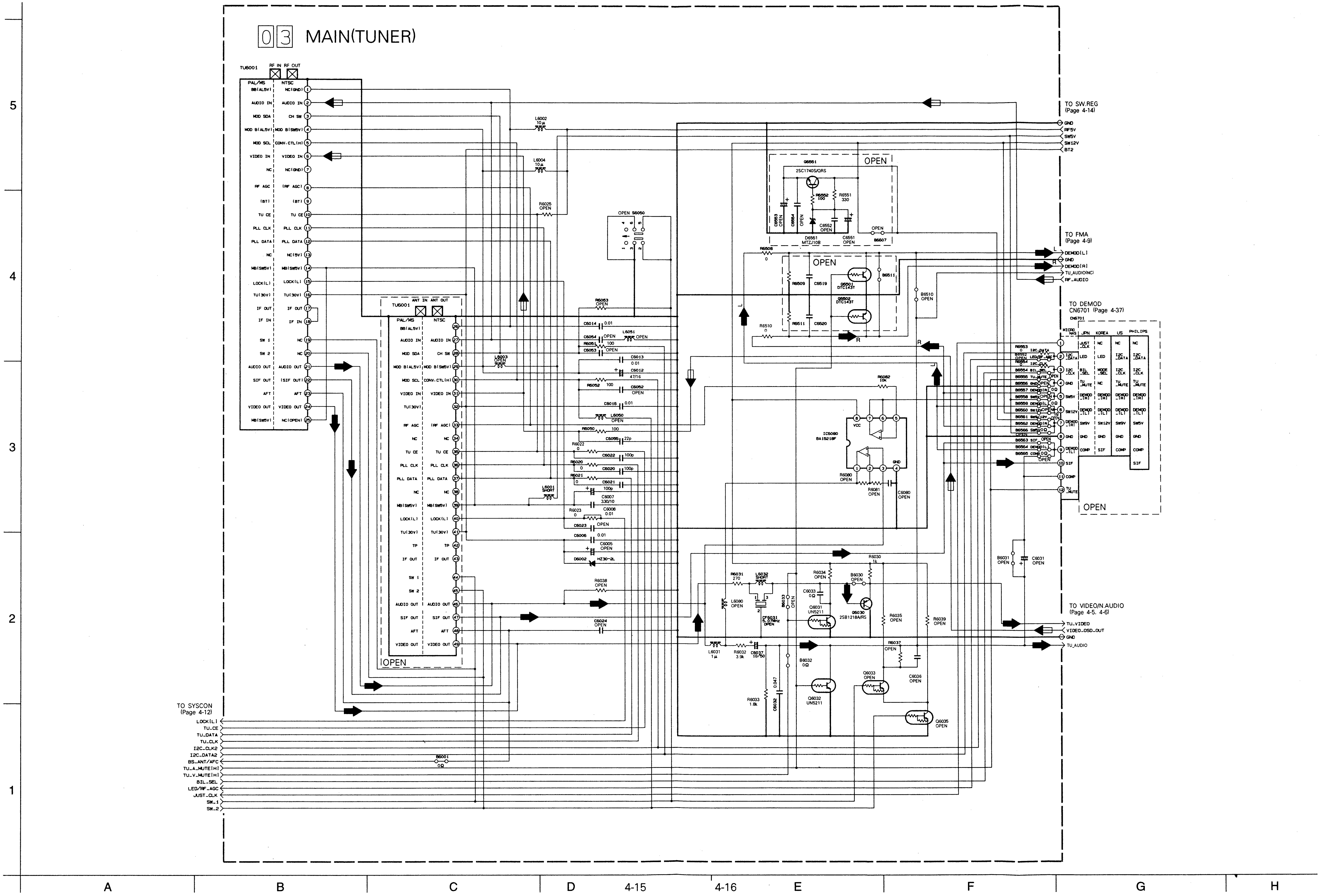

03 MAIN (SYSCON)
IC3001 HD6432194A56F
IC3004 TA7291S
IC3801 TA7291S
IC3003
IC3301
CN3501
OPEN
WF1
WF2
WF3
WF4
WF5
WF6
TO DRUM MOTOR
TO LOADING MOTOR
TO CAP MDA
TO ROTARY ENCODER
TO SW REG
TO SW/DISPLAY CN7001
TO TERMINAL(MAIN)
TO LT BATTERY
TO VIDEO/H AUDIO
TO ON SCREEN
TO FMA
TO C BOX CTL
TO TUNER
NC
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTES: 1. For SYSCON waveforms, please refer to page 4-21.
2. The SYSTEM CONTROL circuit of this model has an automatic recognition about the ON/OFF control of the DOCTOR SYSTEM.

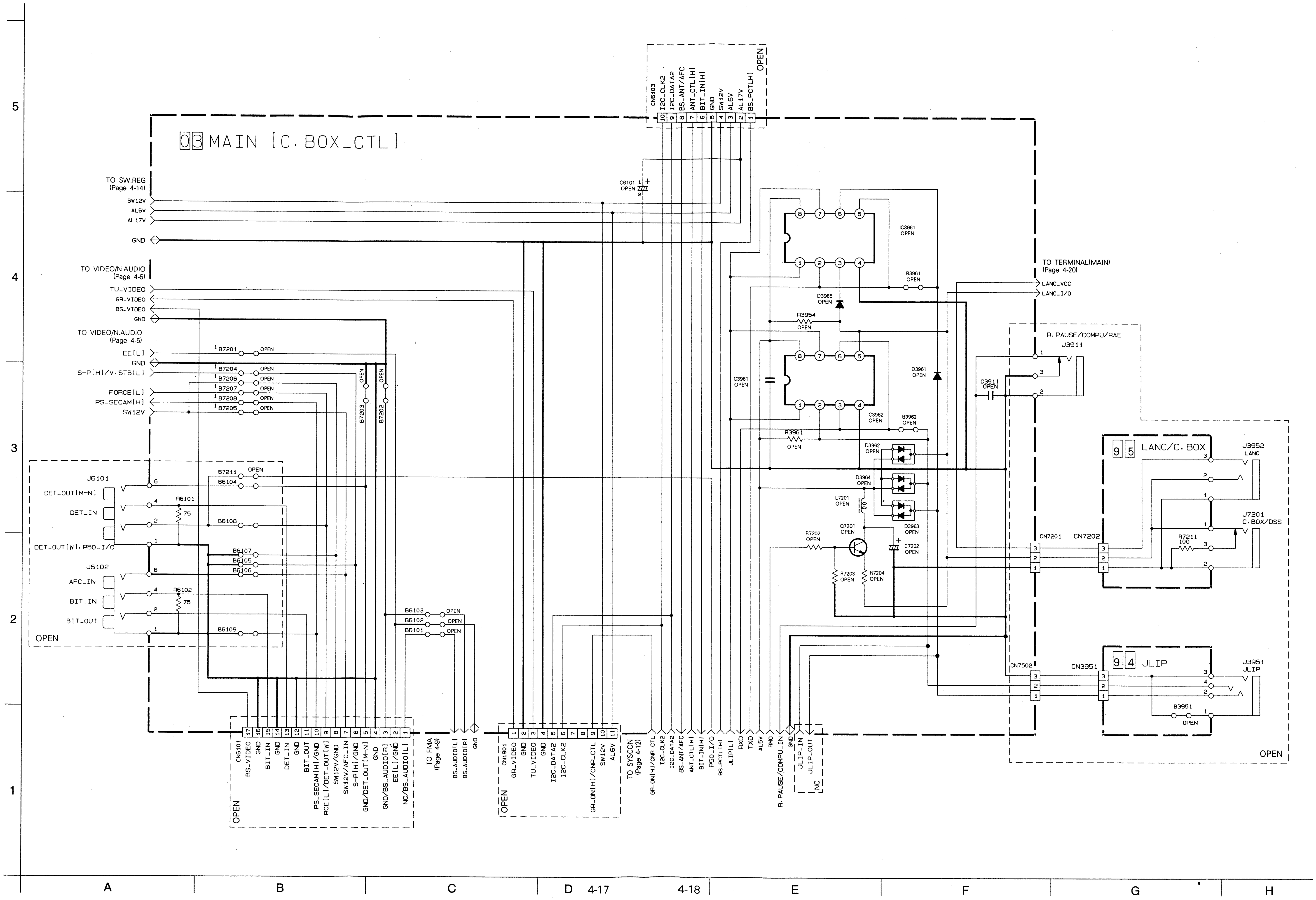
4.6 SWITCHING REGULATOR SCHEMATIC DIAGRAM


03 MAIN[SW.REG]
AC220~240V 50/60Hz
CN5001
F5001 2A/250
LIVE
NEUTRAL
B5001 OPEN
LF5001
LF5002
C5002 0.033/250
C5001 0.068/250
VA5001 OPEN
B5002 OPEN
D5001 S1WB(A)60F4102
C5006 68/400
R5101 330k
R5102 220k
R5105 OPEN
R5104 150k 2W
C5101 0.0047/1k
D5101 AU01
D5102 AU01
R5103 68k
C5104 1/50
R5113 OPEN
C5102 33p/1k
T5001
K5101
Q5101 2SK2632-CB14
R5110 220k
C5110 33p/1k
C5107 0.1/50
D5105 1SS133
R5112 820
R5107 330 1/2W
C5103 OPEN
C5105 0.018/50
R5109 680
R5111 820
C5106 2700/50
R5108 2.2k
D5103 1SS133
D5104 OPEN
PC5101
PC5102 OPEN
Q5102 2SD2144S/UV
Q5103 OPEN
R5106 0.39 1W
D5106 OPEN
R5114 OPEN
R5116 OPEN
C5109 OPEN
SG5001 OPEN
VA5002 OPEN
R5001 OPEN
C5003 OPEN
C5108 OPEN
R5115 OPEN
C5004 OPEN
C5005 0.0022/250
GROUND POINT FOR PRIMARY VOLTAGE
DANGEROUS VOLTAGE
GROUND POINT FOR SECONDARY VOLTAGE
D5201 AU01Z
C5201 220/6.3
B5303 OPEN
Q5312 2SA1745/6-7
R5313 2.2k
R5312 4.7k
R5307 1k
R5301 0
R5314 2.2k
PC5301
C5305 0.01/50
IC5301 LA5634
VCC2 VO2 STB GND V01-FIL VO1 VCC1 SENSE NF VOERR
D5206 FMB-24
D5207 OPEN
D5212 OPEN
D5202 FML-12S
D5203 OPEN
D5204 OPEN
D5205 OPEN
D5208 OPEN
C5210 OPEN
D5209 OPEN
L5202 33μ
C5203 1200/10
C5208 220/10
CP5301 ICP-N38
L5201 33μ
C5207 220/16
C5202 820/16
D5301 RD15ES/B1
R5305 470
C5206 OPEN
D5302 RD6.8ES/B1
C5310 1/50
C5301 220/6.3
C5302 10/50
C5303 100/16
R5326 OPEN
R5306 33k
R5327 OPEN
C5304 0.018/50
R5332 OPEN
R5325 OPEN
R5333 OPEN
R5334 OPEN
D5305 SHORT
D5306 OPEN
R5315 OPEN
Q5307 OPEN
Q5308 OPEN
D5313 OPEN
B5301 OPEN
Q5306 2SB1268
R5310 4.7k
R5311 2.2k
D5308 1SS133
R5316 OPEN
D5307 1SS133
B5302 OPEN
CP5303 SHORT
D5309 1SS133
Q5310 UN5211
B5307 0Ω
R5308 OPEN
D5312 OPEN
R5331 0
C5312 OPEN
L5301 SHORT
Q5303 2SD2144S/UVW
Q5304 2SD1450/ST
R5324 1k
R5319 510
Q5305 UN5111
B5305 OPEN
R5321 220
D5310 OPEN
D5311 RD5.1ES/B3
R5320 470
C5307 22/16
C5306 100/10
R5322 47k
C5308 47/25
C5309 100/16
CP5302 ICP-N25
B5306 OPEN
R5308 OPEN
Q5301 OPEN
IC5302 OPEN
R5329 OPEN
R5330 OPEN
C5311 OPEN
R5309 OPEN
Q5302 OPEN
D5213 OPEN
R5328 OPEN
C5209 OPEN
D5210 AU01Z
C5204 4.7/100
R5323 47k
R5302 1k
R5303 1.2k
D5304 1SS133
D5303 MTZJ27C
C5205 10/50
R5304 220 1/4W
D5211 AU01Z
B5304 OPEN
Q5311 2SA1576/R6
R5317 27k
R5318 27k
SW5V(2)
SW5V
SW12V
GND
TO VIDEO/N.AUDIO (Page 4-5, 4-6)
P.SAVE(L)
DC3.5V(+)
DC3.5V(-)
SW5V
P.CTL(H)
SW12V
DRUM_12V
TO SYSCON (Page 4-11)
SW5V
SW12V
GND
TO FMA (Page 4-10)
SW5V
GND
TO ON SCREEN (Page 4-7)
SW12V
AL6V
AL17V
GND
TO C.BOX CTL (Page 4-17)
M12V
GND(M)
TO SYSCON (Page 4-12)
AL5.8V
M12V
RCU5V
TO SYSCON (Page 4-11)
RF5V
SW5V
SW12V
BT2
GND
TO TUNER (Page 4-16)
CH+12V
SW12V
GND
TO TERMINAL(MAIN) (Page 4-20)
GND(M)
B_UP5V
M12/17V
V_UP(H)
GND
48V
-29V
TO SYSCON (Page 4-11)
5
4
3
2
1
A
B
C
D
E
F
G
H

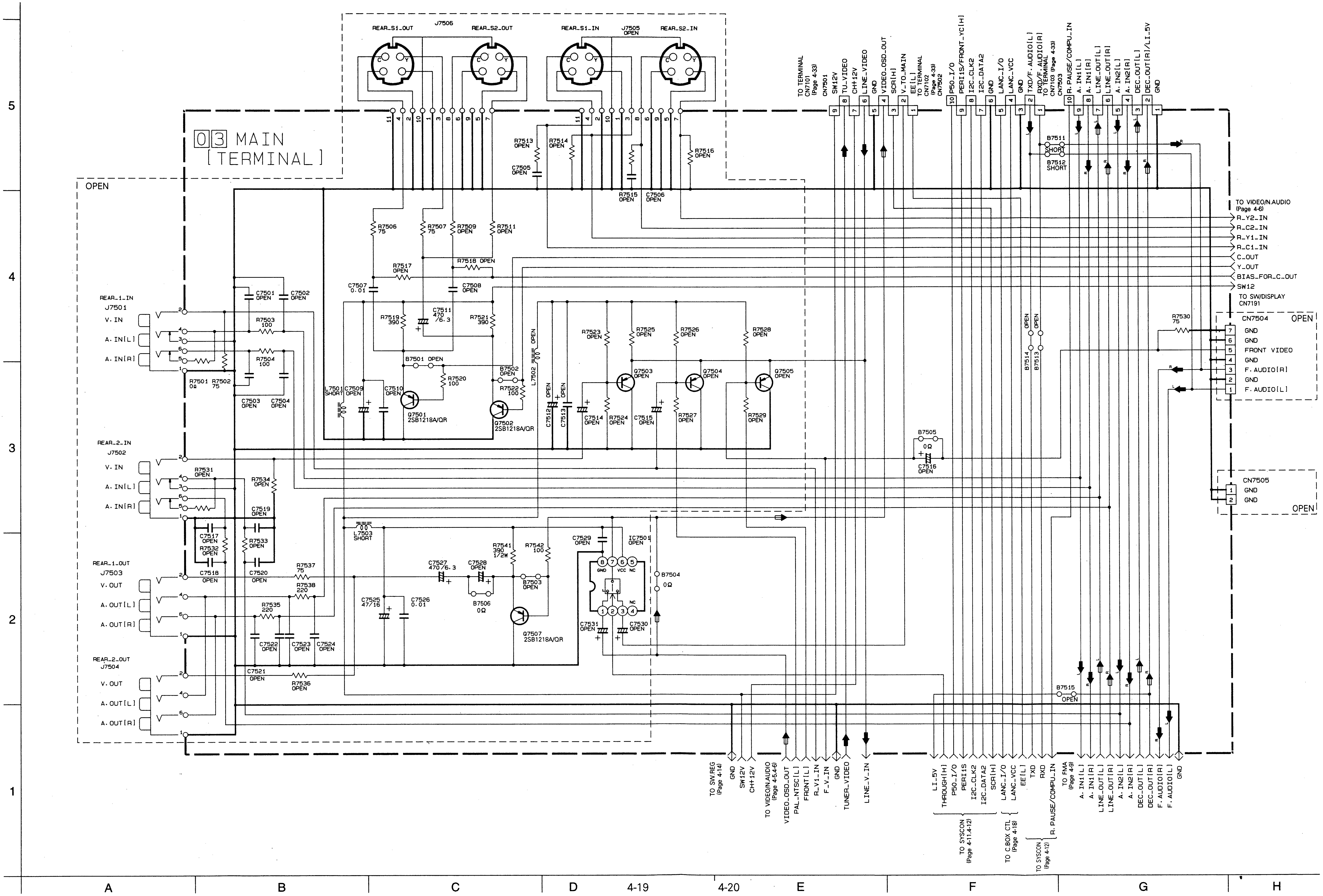
4.7 TUNER SCHEMATIC DIAGRAM


03 MAIN(TUNER)
TU6001
RF IN
RF OUT
PAL/MS
NTSC
BB(AL5V)
NC(GND)
AUDIO IN
MOD SDA
CH SW
MOD B(AL5V)
MOD B(SW5V)
MOD SCL
CONV.CTL(H)
VIDEO IN
NC
RF AGC
(RF AGC)
(BT)
TU CE
PLL CLK
PLL DATA
NC(5V)
MB(SW5V)
LOCK(L)
TU(30V)
IF OUT
IF IN
SW 1
SW 2
AUDIO OUT
SIF OUT
(SIF OUT)
AFT
VIDEO OUT
NC(OPEN)
ANT IN
ANT OUT
TP
OPEN
L6002 10µ
L6004 10µ
R6025 OPEN
L6003 OPEN
L6001 SHORT
OPEN S6050
R6063 OPEN
C6014 0.01
C6054 OPEN
L6051 OPEN
R6051 100
C6053 OPEN
C6013 0.01
C6012 47/16
R6052 100
C6052 OPEN
C6016 0.01
L6050 OPEN
R6050 100
C6055 22p
R6022 0
C6022 100p
R6020 0
C6020 100p
R6021 0
C6021 100p
C6007 330/10
R6023 0
C6008 0.01
C6023 OPEN
C6006 0.01
C6005 OPEN
D6002 HZ30-2L
R6038 OPEN
C6024 OPEN
Q6551 2SC1740S/QRS
R6552 100
R6551 330
C6553 OPEN
C6554 OPEN
D6551 MTZJ10B
C6552 OPEN
C6551 OPEN
B6607
R6508 0
R6509
C6519
Q6501 DTC143T
Q6502 DTC143T
B6511
R6511
C6520
R6510 0
B6510 OPEN
L
R
R6082 10k
IC5080 BA15218F
VCC
GND
R6080 OPEN
R6081 OPEN
C6080 OPEN
R6030 1k
R6031 270
L6032 SHORT
R6034 OPEN
B6030 OPEN
C6033 0Ω
L6080 OPEN
Q6031 UN5211
Q6030 2SB1218A/RS
CF6031 5.07MHz OPEN
B6033 OPEN
R6035 OPEN
R6039 OPEN
L6031 1µ
R6032 3.9k
C6037 10/50
R6037 OPEN
B6032 0Ω
0.047
R6033 1.8k
C6032
Q6032 UN5211
Q6033 OPEN
C6036 OPEN
Q6035 OPEN
B6031 OPEN
C6031 OPEN
B6001 0Ω
B6553 0
B6552 OPEN
B6554
B6555
B6556
B6557
B6558
B6559
B6560
B6561
B6562
B6566
B6563
B6564
B6565
I2C_DATA
LED/RF_AGC
I2C_CLK
BIL_SEL
TU_MUTE
GND
DEMOD(R)
SW5V
DEMOD(L)
SW12V
SW9/12V
SIF
COMP
0Ω
TO SW.REG
(Page 4-14)
GND
RF5V
SW5V
SW12V
BT2
TO FMA
(Page 4-9)
DEMOD(L)
GND
DEMOD(R)
TU_AUDIO(NC)
RF_AUDIO
TO DEMOD
CN6701 (Page 4-37)
CN6701
MICRO NAS
JPN
KOREA
US
PHILIPS
JUST_CLK
NC
LED
I2C_DATA
I2C_CLK
BIL_SEL
MODE_SEL
TU_MUTE
DEMOD_(R)
DEMOD_(L)
SW9V
SW12V
SW5V
GND
COMP
SIF
TO VIDEO/N.AUDIO
(Page 4-5, 4-6)
TU_VIDEO
VIDEO_OSD_OUT
GND
TU_AUDIO
TO SYSCON
(Page 4-12)
LOCK(L)
TU_CE
TU_DATA
TU_CLK
I2C_CLK2
I2C_DATA2
BS_ANT/AFC
TU_A_MUTE(H)
TU_V_MUTE(H)
BIL_SEL
LED/RF_AGC
JUST_CLK
SW_1
SW_2
5
4
3
2
1
A
B
C
D
E
F
G
H

4.8 C.BOX CTL SCHEMATIC DIAGRAM


03 MAIN [C. BOX_CTL]
TO SW.REG
(Page 4-14)
SW12V
AL6V
AL17V
GND
TO VIDEO/N.AUDIO
(Page 4-6)
TU_VIDEO
GR_VIDEO
BS_VIDEO
GND
TO VIDEO/N.AUDIO
(Page 4-5)
EE[L]
GND
S-P[H]/V. STB[L]
FORCE[L]
PS_SECAM[H]
SW12V
B7201 OPEN
B7204 OPEN
B7206 OPEN
B7207 OPEN
B7208 OPEN
B7205 OPEN
B7203 OPEN
B7202 OPEN
J6101
DET_OUT[M-N]
DET_IN
DET_OUT[W]. P50_I/O
R6101 75
B7211 OPEN
B6104
B6108
B6107
B6105
B6106
J6102
AFC_IN
BIT_IN
BIT_OUT
R6102 75
B6109
OPEN
B6103 OPEN
B6102 OPEN
B6101 OPEN
CN6101
BS_VIDEO
GND
BIT_IN
GND
DET_IN
GND
BIT_OUT
PS_SECAM[H]/GND
RCE[L]/DET_OUT[W]
SW12V/GND
SW12V/AFC_IN
S-P[H]/GND
GND/DET_OUT[M-N]
GND
GND/BS_AUDIO[R]
EE[L]/GND
NC/BS_AUDIO[L]
OPEN
TO FMA
(Page 4-9)
BS_AUDIO[L]
BS_AUDIO[R]
GND
CN1901
GR_VIDEO
GND
TU_VIDEO
GND
I2C_DATA2
I2C_CLK2
GR_ON[H]/CNR_CTL
SW12V
AL6V
OPEN
TO SYSCON
(Page 4-12)
GR_ON[H]/CNR_CTL
I2C_CLK2
I2C_DATA2
BS_ANT/AFC
ANT_CTL[H]
BIT_IN[H]
P50_I/O
BS_PCTL[H]
JLIP[L]
RXD
TXD
AL5V
RMO
R. PAUSE/COMPU_IN
GND
JLIP_IN
JLIP_OUT
NC
CN6103
I2C_CLK2
I2C_DATA2
BS_ANT/AFC
ANT_CTL[H]
BIT_IN[H]
GND
SW12V
AL6V
AL17V
BS_PCTL[H]
OPEN
C6101 OPEN
IC3961 OPEN
B3961 OPEN
D3965 OPEN
R3954 OPEN
C3961 OPEN
D3961 OPEN
IC3962 OPEN
B3962 OPEN
R3961 OPEN
D3962 OPEN
D3964 OPEN
L7201 OPEN
D3963 OPEN
R7202 OPEN
Q7201 OPEN
C7202 OPEN
R7203 OPEN
R7204 OPEN
TO TERMINAL(MAIN)
(Page 4-20)
LANC_VCC
LANC_I/O
R. PAUSE/COMPU/RAE
J3911
C3911 OPEN
95 LANC/C. BOX
J3952
LANC
J7201
C. BOX/DSS
R7211 100
CN7201
CN7202
CN7502
CN3951
94 JLIP
J3951
JLIP
B3951 OPEN
OPEN
5
4
3
2
1
A
B
C
D
E
F
G
H

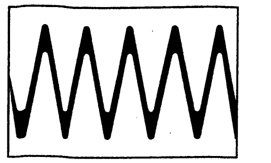
4.9 TERMINAL(MAIN) SCHEMATIC DIAGRAM


03 MAIN
[TERMINAL]
OPEN
J7506
REAR_S1_OUT
REAR_S2_OUT
REAR_S1_IN
J7505 OPEN
REAR_S2_IN
R7513 OPEN
R7514 OPEN
C7505 OPEN
R7516 OPEN
R7515 OPEN
C7506 OPEN
R7506 75
R7507 75
R7509 OPEN
R7511 OPEN
R7517 OPEN
R7518 OPEN
C7507 0.01
C7508 OPEN
C7511 470 /6.3
R7519 390
R7521 390
B7501 OPEN
R7520 100
B7502 OPEN
R7522 100
L7501 SHORT
C7509 OPEN
C7510 OPEN
Q7501 2SB1218A/QR
Q7502 2SB1218A/QR
L7502 OPEN
C7512 OPEN
C7513 OPEN
R7523 OPEN
R7525 OPEN
R7526 OPEN
R7528 OPEN
Q7503 OPEN
Q7504 OPEN
Q7505 OPEN
C7514 OPEN
R7524 OPEN
C7515 OPEN
R7527 OPEN
R7529 OPEN
REAR_1_IN
J7501
V. IN
A. IN[L]
A. IN[R]
C7501 OPEN
C7502 OPEN
R7503 100
R7504 100
R7501 0Ω
R7502 75
C7503 OPEN
C7504 OPEN
REAR_2_IN
J7502
V. IN
A. IN[L]
A. IN[R]
R7531 OPEN
R7534 OPEN
C7519 OPEN
C7517 OPEN
R7532 OPEN
R7533 OPEN
C7518 OPEN
C7520 OPEN
REAR_1_OUT
J7503
V. OUT
A. OUT[L]
A. OUT[R]
R7537 75
R7538 220
R7535 220
C7522 OPEN
C7523 OPEN
C7524 OPEN
REAR_2_OUT
J7504
V. OUT
A. OUT[L]
A. OUT[R]
C7521 OPEN
R7536 OPEN
L7503 SHORT
C7525 47/16
C7526 0.01
C7527 470/6.3
C7528 OPEN
B7506 0Ω
R7541 390 1/2W
R7542 100
B7503 OPEN
Q7507 2SB1218A/QR
C7529 OPEN
IC7501 OPEN
GND VCC NC
NC
C7531 OPEN
C7530 OPEN
B7504 0Ω
TO TERMINAL CN7101 (Page 4-33)
CN7501
SW12V
TU_VIDEO
CH+12V
LINE_VIDEO
GND
VIDEO_OSD_OUT
SCR[H]
V_TO_MAIN
EE[L]
TO TERMINAL CN7102 (Page 4-33)
CN7502
P50_I/O
PERI1S/FRONT_YC[H]
I2C_CLK2
I2C_DATA2
GND
LANC_I/O
LANC_VCC
GND
TXD/F. AUDIO[L]
RXD/F. AUDIO[R]
TO TERMINAL CN7103 (Page 4-33)
CN7503
R. PAUSE/COMPU_IN
A. IN1[L]
A. IN1[R]
LINE_OUT[L]
LINE_OUT[R]
A. IN2[L]
A. IN2[R]
DEC_OUT[L]
DEC_OUT[R]/LI_5V
GND
B7511 SHORT
B7512 SHORT
TO VIDEO/N.AUDIO (Page 4-6)
R_Y2_IN
R_C2_IN
R_Y1_IN
R_C1_IN
C_OUT
Y_OUT
BIAS_FOR_C_OUT
SW12
TO SW/DISPLAY CN7191
R7530 75
CN7504 OPEN
GND
GND
FRONT VIDEO
GND
F. AUDIO[R]
GND
F. AUDIO[L]
B7514 OPEN
B7513 OPEN
B7505 0Ω
C7516 OPEN
CN7505
GND
GND
OPEN
B7515 OPEN
TO SW.REG (Page 4-14)
GND
SW12V
CH+12V
TO VIDEO/N.AUDIO (Page 4-5,4-6)
VIDEO_OSD_OUT
PAL_NTSC[L]
FRONT[L]
R_V1_IN
F_V_IN
GND
TUNER_VIDEO
LINE_V_IN
LI_5V
THROUGH[H]
P50_I/O
PERI1S
I2C_CLK2
I2C_DATA2
SCR[H]
TO SYSCON (Page 4-11,4-12)
LANC_I/O
LANC_VCC
TO C.BOX CTL (Page 4-18)
EE[L]
TXD
RXD
TO SYSCON (Page 4-12)
R. PAUSE/COMPU_IN
TO FMA (Page 4-9)
A. IN1[L]
A. IN1[R]
LINE_OUT[L]
LINE_OUT[R]
A. IN2[L]
A. IN2[R]
DEC_OUT[L]
DEC_OUT[R]
F. AUDIO[R]
F. AUDIO[L]
GND
1
2
3
4
5
A
B
C
D
E
F
G
H

WAVEFORMS

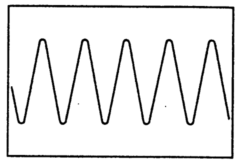
— VIDEO/N.AUDIO —

WF1 IC1-4



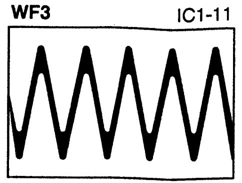
REC 0.7 Vp-p
10 mV/0.5 msec/DIV

WF2 IC1-9



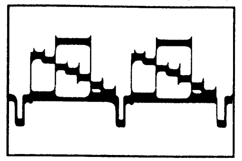
REC 0.09 Vp-p
2 mV/0.5 msec/DIV

WF3 IC1-11



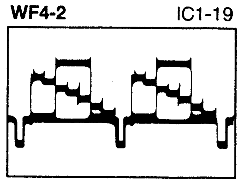
PB 0.44 Vp-p
10 mV/0.5 msec/DIV

WF4-1 IC1-19



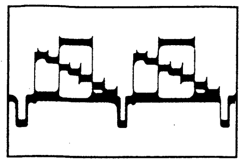
REC 0.54 Vp-p
20 mV/20 μsec/DIV

WF4-2 IC1-19



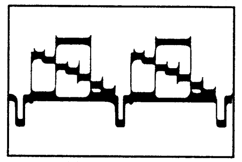
PB 0.6 Vp-p
20 mV/20 μsec/DIV

WF5-1 IC1-23



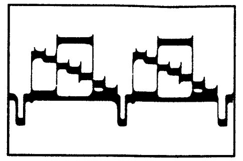
REC 0.48 Vp-p
20 mV/20 μsec/DIV

WF5-2 IC1-23



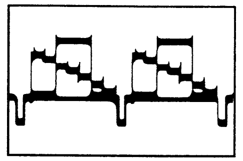
PB 0.54 Vp-p
20 mV/20 μsec/DIV

WF6-1 IC1-42



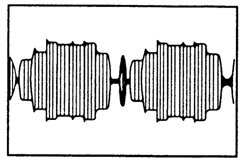
REC 0.4 Vp-p
20 mV/20 μsec/DIV

WF6-2 IC1-42



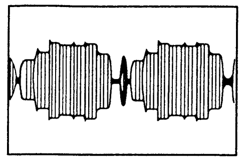
PB 0.46 Vp-p
20 mV/20 μsec/DIV

WF7-1 IC1-46



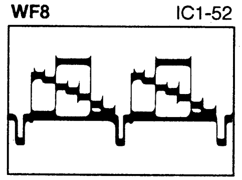
REC 0.27 Vp-p
5 mV/10 μsec/DIV

WF7-2 IC1-46



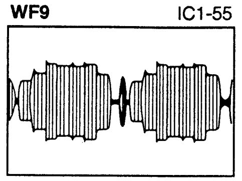
PB 0.34 Vp-p
5 mV/10 μsec/DIV

WF8 IC1-52



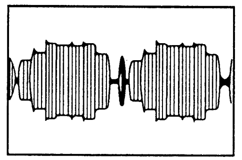
PB 2.3 Vp-p
0.1 V/20 μsec/DIV

WF9 IC1-55



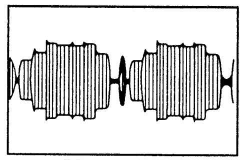
PB 0.7 Vp-p
20 mV/10 μsec/DIV

WF10-1 IC1-58



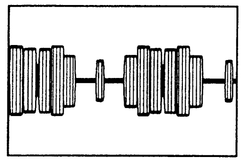
REC 0.44 Vp-p
10 mV/10 μsec/DIV

WF10-2 IC1-58



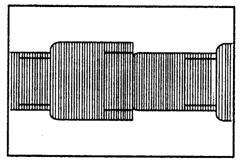
PB 0.56 Vp-p
10 mV/10 μsec/DIV

WF11-1 IC1-78



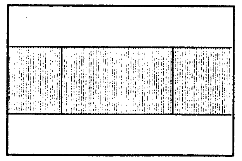
REC 0.66 Vp-p
20 mV/10 μsec/DIV

WF11-2 IC1-78



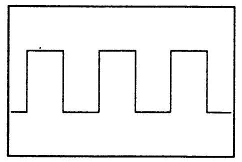
PB 0.22 Vp-p
10 mV/5 msec/DIV

WF12 IC1-87



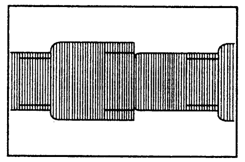
REC 1.7 Vp-p
50 mV/1 msec/DIV

WF13 TP111 D.FF



REC/PB 5.2 Vp-p
0.2 V/10 msec/DIV

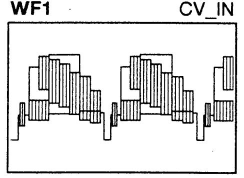
WF14 TP106 V.PB FM



PB 0.3 Vp-p
10 mV/5 msec/DIV

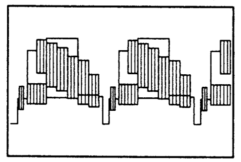
— ON SCREEN —

WF1 IC201-21 CV_IN



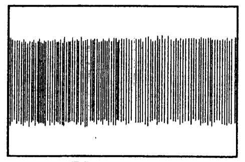
REC/PB 2.3 Vp-p
50 mV/20 μsec/DIV

WF2 IC201-19 CVOUT



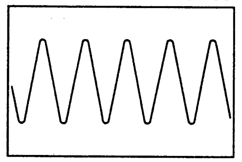
REC/PB 2.3 Vp-p
50 mV/20 μsec/DIV

WF3 IC2201-30



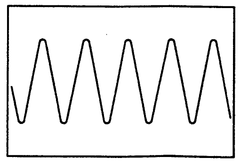
PB 0.4 Vp-p
20 mV/5 msec/DIV

WF4 IC2201-53



REC/PB 1.12 Vp-p
20 mV/0.5 msec/DIV

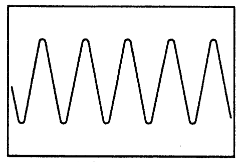
WF5 IC2201-61



REC 0.11 Vp-p
2 mV/0.5 msec/DIV

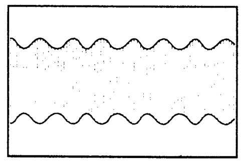
— FMA —

WF1 IC2201-9



REC 0.1 Vp-p
2 mV/0.5 msec/DIV

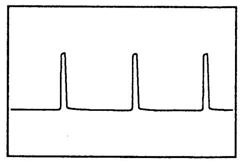
WF2 IC2201-21



REC 0.46 Vp-p
10 mV/1 msec/DIV

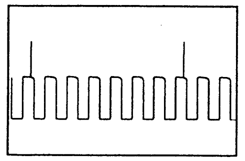
— SYSCON —

WF1 CN3001-4 D.PG



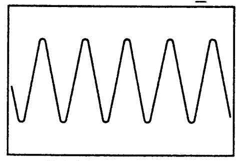
REC/PB 4.8 Vp-p
0.2 V/10 msec/DIV

WF2 CN3001-5 D.FG



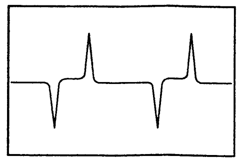
REC/PB 4.5 Vp-p
0.1 V/10 msec/DIV

WF3 CN3003-2 CAP_FG



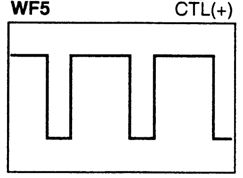
REC/PB 1.7 Vp-p
50 mV/0.5 msec/DIV

WF4 TP4001 CTL P



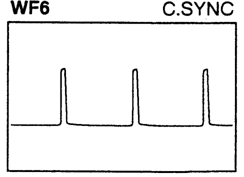
PB 2.3 Vp-p
50 mV/10 msec/DIV

WF5 IC3001-1 CTL(+)



REC 3.9 Vp-p
0.1 V/10 msec/DIV

WF6 IC3001-98 C.SYNC



REC/PB 3.4 Vp-p
0.1 V/20 μsec/DIV

COMPONENT PARTS LOCATION GUIDE <MAIN>

REF.NO.	LOCATION		
CAPACITOR			
C1	A	D	11L
C3	B	C	13L
C5	B	C	14L
C6	B	C	14K
C7	A	D	13L
C9	B	C	14L
C11	B	C	14L
C12	B	C	13K
C13	A	D	13K
C14	B	C	13K
C15	B	C	13K
C16	B	C	14K
C17	B	C	17G
C18	B	C	17G
C19	B	C	16H
C20	A	D	14J
C21	B	C	14J
C22	B	C	15J
C23	B	C	13J
C24	B	C	14J
C25	B	C	14J
C26	B	C	14J
C27	B	C	15J
C29	A	D	14I
C30	A	D	13I
C31	B	C	13I
C32	B	C	12H
C34	A	D	12I
C36	B	C	13J
C37	A	D	13I
C38	B	C	11H
C39	B	C	12G
C40	B	C	12H
C41	B	C	12I
C42	B	C	10H
C43	B	C	11H
C44	B	C	10H
C45	B	C	10H
C46	B	C	10H
C47	B	C	11J
C48	A	D	11I
C49	B	C	9H
C50	B	C	9H
C51	B	C	10M
C52	B	C	10N
C53	B	C	11N
C54	A	D	11J
C55	A	D	10J
C56	A	D	10K
C57	B	C	10K
C58	B	C	10J
C59	B	C	10J
C60	B	C	9K
C61	B	C	8J
C62	B	C	9K
C63	B	C	10K
C64	A	D	8K
C65	B	C	10K
C73	B	C	12H
C74	B	C	12G
C76	B	C	17G
C77	B	C	17G
C78	B	C	18G
C79	B	C	17G
C80	B	C	16G
C81	B	C	13K
C82	B	C	13L
C83	B	C	13L
C84	B	C	13L
C85	B	C	16G
C86	A	D	17H
C87	B	C	16G
C88	B	C	15G
C89	B	C	16G
C90	B	C	16G
C91	B	C	10I
C92	B	C	9K
C95	B	C	14K
C98	B	C	9K
C99	B	C	9J
C101	B	C	9K
C102	B	C	19I
C104	B	C	11I
C105	B	C	12N
C107	B	C	13I
C115	B	C	12H
C120	B	C	17H
C129	B	C	16J
C130	B	C	16I
C131	B	C	15J
C134	B	C	11J
C136	B	C	13K
C141	B	C	12I
C145	B	C	10G
C146	B	C	15G
C147	B	C	15H
C148	B	C	15H
C150	A	D	18G
C153	B	C	13G
C154	B	C	9J
C158	B	C	14J
C164	B	C	14K
C165	B	C	14K
C168	B	C	11L
C169	B	C	9H
C171	B	C	11H
C175	B	C	9J
C176	B	C	18H
C177	B	C	13N
C178	B	C	11H
C181	B	C	12H
C182	B	C	9I
C183	B	C	9I
C191	B	C	15G
C193	B	C	9J
C201	A	D	7N
C202	B	C	8M
C203	B	C	8L
C204	B	C	8L
C205	B	C	8L
C206	B	C	7M
C207	B	C	7M
C208	B	C	6L
C209	B	C	7M
C210	B	C	6M
C211	B	C	6M
C212	B	C	6L
C213	A	D	6L
C214	B	C	6M
C215	B	C	6M
C216	A	D	6M
C217	B	C	7N
C218	B	C	7N
C219	B	C	7N
C220	B	C	7M
C222	B	C	8M
C223	B	C	6N
C224	B	C	6N
C401	B	C	18I
C402	B	C	18I
C403	B	C	17I
C404	B	C	17I
C405	B	C	17I
C406	B	C	17I
C407	B	C	16J
C408	B	C	16J
C409	B	C	16J
C2001	B	C	14M
C2002	A	D	14L
C2003	B	C	12L
C2004	A	D	12L
C2005	B	C	11L
C2006	B	C	12L
C2007	A	D	12L
C2008	B	C	11L
C2009	A	D	11L
C2010	A	D	15M
C2011	B	C	12M
C2013	B	C	13M
C2015	A	D	15M
C2016	A	D	15N
C2017	B	C	11L
C2051	B	C	7I
C2052	A	D	7I
C2053	B	C	6J
C2054	B	C	6J
C2055	A	D	6J
C2061	A	D	20G
C2062	B	C	20F
C2063	B	C	20F
C2064	A	D	20F
C2101	A	D	18N
C2102	A	D	13L
C2151	B	C	17J
C2152	B	C	18J
C2201	A	D	17M
C2202	A	D	17N
C2203	A	D	17N
C2204	A	D	17N
C2205	A	D	16M
C2206	A	D	16M
C2207	A	D	16N
C2208	A	D	16L
C2209	A	D	16L
C2210	A	D	17J
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C2212	A	D	18J
C2213	A	D	18K
C2214	B	C	18L
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C2216	A	D	18L
C2217	A	D	19L
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C2220	A	D	18M
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C2222	A	D	18N
C2223	B	C	18N
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C2227	A	D	18N
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C2230	B	C	16M
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C2233	B	C	17K
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C2255	B	C	16K
C2256	B	C	19L
C2257	A	D	16K
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C2259	B	C	16K
C2260	B	C	17J
C2261	B	C	16K
C2262	B	C	15K
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C2501	A	D	20B
C2502	B	C	21C
C2503	A	D	20C
C2504	B	C	20C
C2505	A	D	20B
C2506	B	C	19D
C2507	B	C	20D
C2508	B	C	19D
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C2512	B	C	20B
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C2517	B	C	21C
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C2519	B	C	18C
C2520	B	C	20B
C2521	A	D	20B
C3001	B	C	8J
C3002	B	C	8H
C3003	A	D	7H
C3004	B	C	7H
C3007	B	C	5E
C3008	B	C	21E
C3010	A	D	1B
C3011	A	D	1B
C3012	A	D	4B
C3013	B	C	5B
C3014	B	C	9E
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C3021	B	C	9B
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C3027	B	C	12B
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C3029	B	C	11B
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C3040	B	C	8C
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C3042	A	D	4A
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C3302	B	C	15C
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C3503	B	C	14F
C3504	B	C	14F
C3505	B	C	14F
C3911	B	C	17P
C3961	B	C	16A
C4001	B	C	9E
C4002	B	C	10E
C4003	B	C	9F
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C4005	B	C	9F
C4006	B	C	9F
C4007	B	C	10F
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C4009	B	C	9E
C4010	B	C	7E
C4011	B	C	11F
C4012	B	C	11G
C4013	B	C	11F
C4014	B	C	11F
C4015	B	C	10F
C5001	A	D	2O
C5002	A	D	3N
C5003	A	D	4P
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C5006	A	D	3M
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C5104	A	D	3L
C5105	A	D	1K
C5106	A	D	4L
C5107	A	D	2K
C5108	A	D	3N
C5109	A	D	2N
C5110	A	D	2K
C5201	A	D	1F
C5202	A	D	2G
C5203	A	D	1G
C5204	A	D	4H
C5205	A	D	1F
C5206	A	D	3G
C5207	A	D	3F
C5208	A	D	1E
C5209	A	D	6P
C5210	A	D	3H
C5301	A	D	2D
C5302	A	D	2D
C5303	A	D	3E
C5304	A	D	4D
C5305	B	C	1F
C5306	A	D	3C
C5307	A	D	2D
C5308	A	D	4F
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C5310	A	D	2C
C5311	A	D	5M
C5312	A	D	3C
C6005	A	D	20M
C6006	B	C	21M
C6007	A	D	21M
C6008	B	C	21M
C6012	A	D	21O
C6013	B	C	21O
C6014	B	C	21P
C6016	B	C	21O
C6020	B	C	22M
C6021	B	C	22M
C6022	B	C	21N
C6023	B	C	22M
C6024	B	C	22K
C6032	B	C	21G
C6033	B	C	22J
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C6037	A	D	21G
C6052	B	C	21O
C6053	B	C	21P
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C6519	B	C	21G
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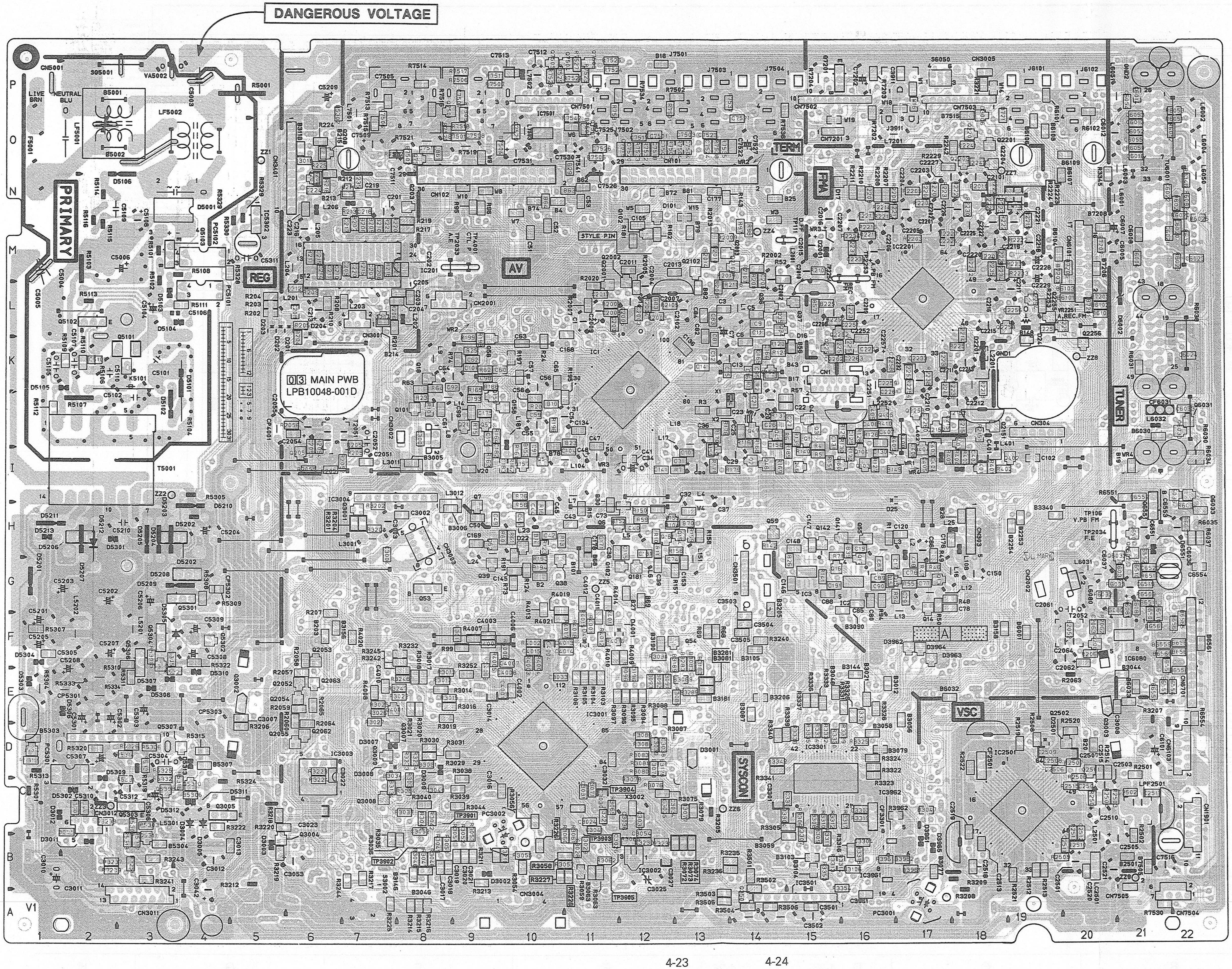
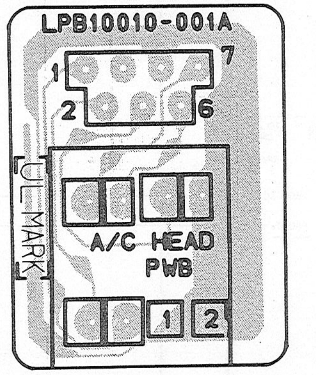
C6551	A	D	21H
C6552	B	C	21H
C6553	A	D	22H
C6554	B	C	22G
C7202	A	D	16P
C7501	B	C	12O
C7502	B	C	12O
C7503	B	C	13O
C7504	B	C	13O
C7505	B	C	7P
C7506	B	C	7O
C7507	B	C	9P
C7508	B	C	9O
C7509	A	D	7O
C7510	B	C	8O
C7511	A	D	8O
C7512	A	D	10P
C7513	B	C	10P
C7514	A	D	11P
C7515	A	D	11P
C7516	A	D	21B
C7517	B	C	12O
C7518	B	C	12O
C7519	B	C	12O
C7520	B	C	12O
C7521	B	C	14O
C7522	B	C	14O
C7523	B	C	13O
C7524	B	C	13O
C7525	A	D	11O
C7526	B	C	11O
C7527	A	D	14O
C7528	A	D	11O
C7529	B	C	10O
C7530	A	D	11O
C7531	A	D	10O
CONNECTOR			
CN1	A	D	15K
CN101	A	D	14O
CN102	A	D	10O
CN303	A	D	18H
CN304	A	D	20J
CN1901	A	D	22C
CN2001	A	D	9L
CN2002	A	D	20G
CN3001	A	D	7L
CN3002	A	D	8J
CN3003	A	D	8H
CN3004	A	D	10A
CN3005	A	D	18P
CN3011	A	D	3A
CN3012	A	D	2C
CN3401	A	D	6O
CN3501	A	D	14H
CN5001	A	D	1P
CN6101	A	D	20L
CN6103	A	D	22D
CN6701	A	D	22E
CN7201	A	D	15O
CN7501	A	D	11P
CN7502	A	D	16P
CN7503	A	D	18P
CN7504	A	D	22A
CN7505	A	D	21B
DIODE			
D16	B	C	15K
D17	B	C	16N
D22	B	C	10H
D24	B	C	19K
D25	B	C	16I
D101	B	C	12N
D201	B	C	6L
D202	B	C	5L
D203	B	C	5L
D204	B	C	6L
D2001	A	D	15M
D2201	A	D	18K
D2501	B	C	19D
D3001	A	D	13D
D3002	A	D	9B
D3003	A	D	5B
D3004	A	D	4C
D3005	A	D	4C
D3006	B	C	18P
D3007	A	D	8D
D3008	B	C	7D
D3009	A	D	8D
D3011	A	D	2B
D3012	A	D	1C
D3961	A	D	17C
D3962	B	C	17F
D3963	B	C	17F
D3964	B	C	17F
D3965	A	D	17B
D4001	B	C	12F
D4002	B	C	11F
D5001	B	C	3N
D5101	A	D	4J
D5102	A	D	3K
D5103	A	D	3L
D5104	A	D	3L
D5105	A	D	2K
D5106	A	D	3N
D5201	A	D	1G
D5202	A	D	4H
D5203	A	D	3H
D5204	A	D	3H
D5205	A	D	3H
D5206	A	D	2H
D5207	A	D	2H
D5208	A	D	4G
D5209	A	D	4G
D5210	A	D	3H
D5211	A	D	1H
D5212	A	D	2H
D5213	A	D	1H
D5301	A	D	2H
D5302	A	D	2C
D5303	A	D	1E
D5304	A	D	1F
D5305	A	D	4F
D5306	A	D	2E
D5307	A	D	3E
D5308	A	D	3E
D5309	A	D	2D
D5310	A	D	4E
D5311	A	D	4C
D5312	B	C	3C
D5313	A	D	4D
D6002	A	D	21M
D6551	A	D	21G
IC			
IC1	B	C	12K
IC2	B	C	16G
IC3	B	C	15G
IC201	A	D	8L
IC2201	B	C	17L
IC2501	B	C	19C
IC3001	B	C	10D
IC3002	B	C	12B
IC3003	A	D	6C
IC3004	A	D	8I
IC3301	B	C	15D
IC3501	A	D	15A
IC3961	B	C	16B
IC3962	B	C	16B
IC5301	A	D	2D
IC5302	A	D	5N
IC6080	B	C	21F
IC7501	B	C	10O
JACK			
J3911	A	D	17P
J6101	A	D	19P
J6102	A	D	20P
J7501	A	D	12P
J7502	A	D	11P
J7503	A	D	13P
J7504	A	D	14P
J7505	A	D	8P
J7506	A	D	9P
COIL			
L1	A	D	14L
L2	A	D	17G
L3	A	D	16H
L4	A	D	13I
L5	A	D	12H
L6	A	D	12G
L7	A	D	11I
L8	A	D	9J
L9	A	D	8K
L12	A	D	17G
L13	A	D	17G
L14	A	D	9J
L16	A	D	18G
L17	A	D	13J
L18	A	D	13J
L23	A	D	10H
L24	A	D	9H
L25	A	D	18H
L104	A	D	11I
L108	A	D	18G
L151	A	D	13G
L181	A	D	10I
L201	A	D	6L
L202	A	D	8L
L203	A	D	7L
L204	A	D	6M
L205	A	D	6N
L206	A	D	7N
L401	A	D	18I
L402	A	D	17I
L2001	A	D	15L
L2201	A	D	18K
L2251	A	D	16K
L2252	A	D	17J
L2501	A	D	20C
L3001	A	D	7H
L3011	B	C	8I
L3012	B	C	8H
L3501	A	D	14A
L5201	A	D	3F
L5202	A	D	2F
L5301	A	D	4C
L6001	A	D	21N
L6002	A	D	22P
L6003	A	D	21O
L6004	A	D	22O
L6031	A	D	20G
L6032	A	D	21J
L6050	A	D	22O
L6051	A	D	21P
L6080	A	D	20G
L7201	A	D	16O
L7501	A	D	7P
L7502	A	D	10P
L7503	A	D	10O
TRANSISTOR			
Q1	B	C	15J
Q2	B	C	14I
Q3	B	C	15J
Q4	B	C	15J
Q6	B	C	12H
Q7	B	C	9H
Q13	B	C	17G
Q14	B	C	17G
Q15	B	C	17G
Q16	B	C	15G
Q17	B	C	16G
Q18	B	C	8K
Q21	B	C	9J
Q34	B	C	14L
Q35	B	C	14L
Q36	B	C	14L
Q37	B	C	15L
Q38	B	C	10G
Q39	B	C	9G
Q45	B	C	14J
Q46	B	C	15I
Q47	B	C	14J
Q48	B	C	14I
Q49	B	C	13I
Q52	B	C	9H
Q53	A	D	8G
Q54	B	C	13F
Q55	B	C	16H
Q56	B	C	10I
Q57	B	C	9J
Q58	B	C	9K
Q59	B	C	14H
Q101	B	C	8J
Q102	B	C	12M
Q103	B	C	16I
Q104	B	C	16I
Q141	B	C	16H
Q142	B	C	15H
Q152	B	C	14K
Q153	B	C	12H
Q154	B	C	13H
Q157	B	C	10I
Q158	B	C	9J
Q159	B	C	9J
Q160	B	C	16I
Q161	B	C	12H
Q181	B	C	12G
Q182	B	C	12G
Q203	B	C	8N
Q204	B	C	7L
Q207	B	C	6N
Q208	B	C	6O
Q211	B	C	7N
Q401	B	C	18I
Q402	B	C	19I
Q403	B	C	18J
Q404	B	C	17I
Q405	B	C	16J
Q2001	B	C	11L
Q2002	B	C	12M
Q2003	B	C	14M
Q2051	B	C	6I
Q2052	B	C	6E
Q2053	B	C	6F
Q2054	B	C	6E
Q2055	B	C	6D
Q2061	B	C	20F
Q2062	B	C	6D
Q2063	B	C	6E
Q2102	B	C	13M
Q2103	B	C	14M
Q2151	B	C	18J
Q2152	B	C	17J
Q2201	B	C	18O
Q2202	B	C	18O
Q2203	B	C	18O
Q2204	B	C	18O
Q2251	B	C	15K
Q2252	B	C	16L
Q2253	B	C	17J
Q2254	B	C	19L
Q2255	B	C	19L
Q2256	B	C	20K
Q2257	B	C	20L
Q2258	B	C	19L
Q2501	B	C	20D
Q2502	B	C	20D
Q3001	B	C	7H
Q3002	A	D	5E
Q3003	A	D	20E
Q3004	B	C	5B
Q3005	A	D	5C
Q3007	B	C	7D
Q3008	B	C	7C
Q3009	B	C	7D
Q3501	B	C	14A
Q4001	B	C	7E
Q5101	A	D	2K
Q5102	A	D	2L
Q5103	A	D	3M
Q5301	A	D	3G
Q5302	B	C	4F
Q5303	A	D	3C
Q5304	A	D	3F
Q5305	B	C	3F
Q5306	A	D	3F
Q5307	B	C	4D
Q5308	B	C	3C
Q5310	B	C	4C
Q5311	B	C	3B
Q5312	B	C	1D
Q6030	B	C	22J
Q6031	B	C	22J
Q6032	B	C	21G
Q6033	B	C	22I
Q6035	B	C	22I
Q6501	B	C	21H
Q6502	B	C	21H
Q6551	A	D	21H
Q7201	A	D	16P
Q7501	B	C	8P
Q7502	B	C	8O
Q7503	B	C	11P
Q7504	B	C	11P
Q7505	B	C	10P
Q7507	B	C	11O
RESISTOR			
R1	B	C	16H
R2	B	C	14K
R3	B	C	13J
R4	B	C	15J
R5	B	C	15I
R6	B	C	15J
R7	B	C	13I
R10	B	C	12H
R11	B	C	12H
R13	B	C	10H
R15	B	C	11H
R16	B	C	10H
R20	B	C	10J
R23	B	C	8J
R24	B	C	10K
R25	B	C	9K
R46	B	C	17G
R47	B	C	17G
R48	B	C	18G
R49	B	C	17H
R50	B	C	17G
R52	B	C	14M
R54	B	C	17G
R55	B	C	17G
R56	B	C	10H
R57	B	C	15J
R59	B	C	12H
R60	B	C	9H
R61	B	C	10H
R62	B	C	9K
R63	B	C	8K
R64	B	C	8K
R68	B	C	13F
R69	B	C	13F
R71	B	C	15H
R73	B	C	10G
R74	B	C	9K
R75	B	C	9J
R76	B	C	10I
R94	B	C	16G
R95	B	C	9N
R96	B	C	9N
R97	B	C	14N
R98	B	C	14M
R99	B	C	9F
R101	B	C	8J
R112	B	C	14K
R116	B	C	14J
R120	B	C	14K
R121	B	C	14K
R123	B	C	10H
R124	B	C	10G
R126	B	C	16J
R127	B	C	16I
R128	B	C	16J
R129	B	C	16J
R130	B	C	16J
R137	B	C	14J
R139	B	C	15J
R140	B	C	15I
R141	B	C	15G
R142	B	C	14H
R143	B	C	13N
R150	B	C	12H
R151	B	C	15I
R156	B	C	13H
R157	B	C	13G
R158	B	C	13H
R159	B	C	13H
R161	B	C	10I
R162	B	C	10I
R163	B	C	9I
R164	B	C	9J
R165	B	C	9K
R166	B	C	9K
R168	B	C	14J
R169	B	C	14I
R170	B	C	13J
R171	B	C	13I
R172	B	C	16I
R178	B	C	13J
R179	B	C	14I
R181	B	C	12M
R182	B	C	12M
R189	B	C	15I
R190	B	C	10G
R191	B	C	10H
R194	B	C	10G
R195	B	C	11J
R196	B	C	10J
R197	B	C	10K
R198	B	C	9K
R199	B	C	9L
R201	B	C	7L
R202	B	C	5L
R203	B	C	5L
R204	B	C	5L
R205	B	C	6L
R206	B	C	7L
R207	B	C	6G
R208	B	C	7L
R209	B	C	6L
R210	B	C	6L
R211	B	C	6M
R212	B	C	6N
R213	B	C	7N
R215	B	C	7M
R216	B	C	7M
R217	B	C	8M
R218	B	C	6N
R219	B	C	8N
R220	B	C	7N
R223	B	C	7N
R224	B	C	6O
R225	B	C	6O
R235	B	C	7N
R401	B	C	18I
R402	B	C	18I
R403	B	C	18I
R404	B	C	18I
R405	B	C	17I
R408	B	C	17J
R409	B	C	17J
R410	B	C	16J
R2001	B	C	14M
R2002	B	C	14M
R2003	B	C	12L
R2004	B	C	12L
R2005	B	C	12L
R2006	B	C	11L
R2007	B	C	11L
R2009	B	C	13M
R2010	B	C	13M
R2013	B	C	13M
R2014	B	C	13M
R2018	B	C	13L
R2019	B	C	13M
R2020	B	C	11L
R2051	B	C	7I
R2052	B	C	7I
R2053	B	C	7J
R2054	B	C	6J
R2055	B	C	6I
R2056	B	C	6J
R2057	B	C	6E
R2058	B	C	6F
R2059	B	C	6E
R2060	B	C	6E
R2061	B	C	20F
R2062	B	C	20F
R2063	A	D	20E
R2064	B	C	6E
R2065	B	C	6E
R2105	B	C	12L
R2106	B	C	14L
R2107	B	C	14M
R2108	B	C	15M
R2151	B	C	18J
R2152	B	C	18J
R2201	B	C	17N
R2202	B	C	17N
R2203	B	C	17M
R2204	B	C	17N
R2205	B	C	17N
R2206	B	C	17N
R2207	B	C	16N
R2208	B	C	16N
R2209	B	C	16N
R2210	B	C	16N
R2211	B	C	16N
R2212	B	C	17N
R2213	B	C	16N
R2214	B	C	16N
R2215	B	C	16M
R2216	B	C	16N
R2217	B	C	16N
R2218	B	C	18K
R2219	B	C	19N
R2220	B	C	18M
R2221	B	C	18N
R2222	B	C	19M
R2223	B	C	19N
R2224	B	C	19N
R2225	B	C	18N
R2226	B	C	18N
R2227	B	C	17M
R2228	B	C	18N
R2229	B	C	18O
R2230	B	C	18N
R2231	B	C	17N
R2232	B	C	19M
R2233	B	C	19M
R2234	B	C	18M
R2235	B	C	18M
R2236	B	C	16M
R2237	B	C	16M
R2238	B	C	17K
R2239	B	C	18K
R2240	B	C	17K
R2241	B	C	18O
R2242	B	C	18O
R2243	B	C	18O
R2244	B	C	18K
R2251	B	C	18K
R2252	B	C	17K
R2253	B	C	19L
R2254	B	C	17K
R2255	B	C	19L
R2501	B	C	21D
R2502	B	C	21B
R2503	B	C	20C
R2504	B	C	20C
R2505	B	C	20C
R2506	B	C	20C
R2507	B	C	20D
R2508	B	C	19D
R2509	B	C	19B
R2510	B	C	20B
R2511	B	C	20B
R2512	B	C	19B
R2513	B	C	19B
R2514	B	C	20D
R2515	B	C	20C
R2519	B	C	19D
R2520	B	C	20D
R2521	B	C	19B
R2522	B	C	18D
R3011	B	C	9F
R3012	B	C	8E
R3013	B	C	8E
R3014	B	C	8E
R3015	B	C	8E
R3016	B	C	8E
R3017	B	C	8E
R3018	B	C	8E
R3019	B	C	8E
R3020	B	C	8E
R3021	B	C	8E
R3022	B	C	8E
R3025	B	C	7E
R3026	B	C	7E
R3027	B	C	7E
R3029	B	C	9D
R3030	B	C	8D
R3031	B	C	8D
R3033	B	C	8C
R3034	B	C	8C
R3035	B	C	7B
R3036	B	C	8B
R3037	B	C	8C
R3038	B	C	9D
R3039	B	C	9C
R3040	B	C	8C
R3041	B	C	8C
R3042	B	C	8C
R3044	B	C	9C
R3046	B	C	8B
R3047	B	C	8B
R3048	B	C	8B
R3049	B	C	8B
R3050	B	C	9C
R3051	B	C	9C
R3052	B	C	9C
R3053	B	C	10B
R3054	B	C	10B
R3055	B	C	10C
R3056	B	C	11B
R3057	B	C	11B
R3058	B	C	11B
R3059	B	C	11B
R3060	B	C	11B
R3061	B	C	11B
R3062	B	C	11B
R3063	B	C	11B
R3066	B	C	12B
R3069	B	C	11C
R3071	B	C	11C
R3072	B	C	13B
R3073	B	C	13B
R3074	B	C	13B
R3075	B	C	12C
R3076	B	C	12C
R3077	B	C	13C
R3078	B	C	12C
R3079	B	C	13C
R3080	B	C	12D
R3081	B	C	12D
R3083	B	C	12D
R3085	B	C	12D
R3086	B	C	12D
R3087	B	C	12E
R3088	B	C	12E
R3089	B	C	13E
R3090	B	C	12F
R3091	B	C	12E
R3092	B	C	12E
R3093	B	C	12E
R3094	B	C	12E
R3095	B	C	12E
R3096	B	C	12E
R3097	B	C	11E
R3103	B	C	11E
R3104	B	C	11E
R3105	B	C	11E
R3106	B	C	11E
R3201	B	C	7H
R3202	B	C	7H
R3203	B	C	7H
R3204	B	C	7H
R3205	A	D	13C
R3206	B	C	5D
R3207	B	C	21E
R3208	A	D	18A
R3209	A	D	18B
R3210	B	C	9B
R3211	B	C	9B
R3212	A	D	5B
R3213	B	C	9B
R3214	B	C	8A
R3215	B	C	8A
R3216	B	C	8A
R3217	B	C	7B
R3218	B	C	5C
R3219	B	C	5B
R3220	B	C	5C
R3221	B	C	18P
R3222	B	C	4C
R3223	B	C	6D
R3224	B	C	6C
R3225	B	C	7A
R3226	B	C	10B
R3227	B	C	10B
R3228	B	C	11B
R3229	B	C	11C
R3230	B	C	12B
R3231	B	C	12B
R3232	B	C	8F
R3233	B	C	8D
R3234	B	C	8D
R3235	B	C	14B
R3236	B	C	14B
R3237	B	C	2B
R3238	B	C	2C
R3239	B	C	2B
R3240	B	C	14F
R3241	B	C	3B
R3242	B	C	8E
R3243	B	C	3B
R3244	B	C	7B
R3245	B	C	8F
R3246	B	C	8E
R3247	B	C	8E
R3251	B	C	3B
R3252	B	C	9E
R3304	B	C	14C
R3305	B	C	15C
R3306	B	C	15C
R3307	B	C	15B
R3308	B	C	15C
R3309	B	C	15B
R3310	B	C	15C
R3311	B	C	15B
R3312	B	C	15C
R3313	B	C	15B
R3314	B	C	16B
R3316	B	C	16B
R3317	B	C	16C
R3318	B	C	16B
R3319	B	C	16C
R3322	B	C	16D
R3323	B	C	16D
R3324	B	C	16D
R3325	B	C	16D
R3326	B	C	16E
R3327	B	C	16E
R3328	B	C	16E
R3329	B	C	16D
R3330	B	C	15D
R3331	B	C	16E
R3332	B	C	15D
R3333	B	C	15E
R3334	B	C	15D
R3335	B	C	15D
R3336	B	C	15E
R3337	B	C	15E
R3338	B	C	15D
R3339	B	C	15D
R3340	B	C	14D
R3341	B	C	14D
R3342	B	C	14D
R3345	B	C	20N
R3346	B	C	22N
R3353	B	C	15B
R3354	B	C	16B
R3501	B	C	14B
R3502	B	C	14B
R3503	B	C	13A
R3504	B	C	14A
R3505	B	C	13A
R3506	B	C	14A
R3961	B	C	16B
R3962	B	C	17C
R4001	B	C	11F
R4002	B	C	10F
R4003	B	C	10F
R4004	B	C	10F
R4005	B	C	9F
R4006	B	C	9F
R4007	B	C	9F
R4008	B	C	7E
R4009	B	C	12F
R4010	B	C	11F
R4011	B	C	11F
R4012	B	C	11F
R4013	B	C	10G
R4014	B	C	11G
R4015	B	C	11F
R4016	B	C	11F
R4017	B	C	11F
R4018	B	C	11F
R4019	B	C	10G
R4020	B	C	7F
R4021	B	C	10F
R5001	A	D	5P
R5101	A	D	3M
R5102	A	D	3L
R5103	A	D	2M
R5104	A	D	4J
R5105	A	D	3K
R5106	A	D	2K
R5107	A	D	2J
R5108	A	D	4M
R5109	B	C	2K
R5110	B	C	2K
R5111	B	C	4L
R5112	B	C	1J
R5113	A	D	2L
R5114	A	D	2N
R5115	A	D	2M
R5116	A	D	2M
R5301	A	D	1C
R5302	B	C	3C
R5303	B	C	3C
R5304	A	D	1E
R5305	A	D	4I
R5306	B	C	3D
R5307	B	C	1F
R5308	B	C	4G
R5309	B	C	4G
R5310	B	C	3F
R5311	B	C	3E
R5312	B	C	1D
R5313	A	D	1D
R5314	B	C	3D
R5315	B	C	4D
R5316	B	C	4C
R5317	B	C	3B
R5318	B	C	3B
R5319	A	D	3D
R5320	B	C	2D
R5321	B	C	4E
R5322	B	C	4F
R5323	A	D	4H
R5324	A	D	5C
R5325	B	C	3D
R5326	B	C	3D
R5327	B	C	3D
R5328	B	C	5M
R5329	A	D	5N
R5330	A	D	5M
R5331	B	C	3C
R5332	B	C	3C
R5333	A	D	2E
R5334	A	D	2E
R6020	B	C	22N
R6021	B	C	22M
R6022	B	C	22N
R6023	B	C	22M
R6025	B	C	22N
R6030	B	C	22I
R6031	B	C	21K
R6032	B	C	20G
R6033	B	C	21G
R6034	B	C	22I
R6035	B	C	22H
R6037	B	C	22H
R6038	B	C	22L
R6039	B	C	22H
R6050	B	C	21O
R6051	B	C	22O
R6052	B	C	22O
R6053	B	C	22P
R6080	B	C	21G
R6081	B	C	21G
R6082	B	C	22N
R6101	B	C	19P
R6102	B	C	20P
R6508	B	C	21F
R6509	B	C	21G
R6510	B	C	21F
R6511	B	C	21G
R6551	B	C	21I
R6552	B	C	21I
R6553	A	D	21D
R6554	B	C	22E
R7202	B	C	16P
R7203	B	C	16P
R7204	A	D	15P
R7501	B	C	12P
R7502	B	C	13P
R7503	B	C	12O
R7504	B	C	13O
R7506	B	C	9P
R7507	B	C	9P
R7509	B	C	9P
R7511	B	C	9P
R7513	B	C	7P
R7514	B	C	8P
R7515	B	C	7O
R7516	B	C	8P
R7517	B	C	9P
R7518	B	C	9O
R7519	A	D	9O
R7520	B	C	8O
R7521	A	D	8O
R7522	B	C	8O
R7523	B	C	11P
R7524	B	C	11P
R7525	B	C	11Q
R7526	B	C	11P
R7527	B	C	11P
R7528	B	C	10P
R7529	B	C	10P
R7530	B	C	21A
R7531	B	C	11P
R7532	B	C	12O
R7533	B	C	12O
R7534	B	C	12P
R7535	B	C	13O
R7536	B	C	15P
R7537	B	C	14P
R7538	B	C	13O
R7541	A	D	11O
R7542	B	C	11O
TEST POINT			
TP106	A	D	21H
TP111	A	D	15M
TP2033	A	D	8M
TP2034	A	D	21H
TP2253	A	D	16L
TP2254	A	D	16L
TP3901	B	C	8C
TP3902	B	C	8B
TP3903	B	C	11C
TP3904	B	C	11C
TP3905	B	C	12B
TP4001	A	D	9M
OTHER			
CF2501	A	D	18D
CF3301	A	D	16C
CF6031	A	D	21J
CP3501	A	D	14A
CP4001	A	D	5J
CP5301	A	D	1E
CP5302	A	D	4G
CP5303	A	D	4E
F5001	A	D	1P
GND1	A	D	19K
GND2	A	D	21P
K5101	A	D	3K
LC2501	A	D	20B
LF5001	A	D	2P
LF5002	A	D	4O
LPF2501	A	D	21C
PC3001	A	D	17A
PC3002	A	D	9C
PC5101	A	D	4L
PC5102	A	D	4M
PC5301	A	D	2D
S3002	A	D	7A
S6050	A	D	17P
SG5001	A	D	3P
T2051	A	D	6J
T2052	A	D	20F
T5001	A	D	1J
TU6001	A	D	21P
VA5001	A	D	2O
VA5002	A	D	4P
VR2251	A	D	19L
WR1	A	D	16I
WR2	A	D	14O
WR3	A	D	11I
WR4	A	D	21I
X1	A	D	14J
X2	A	D	14J
X3001	A	D	11C
X3002	A	D	12C

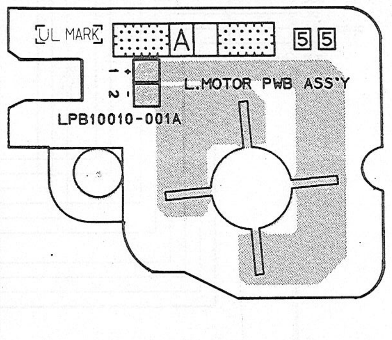
4.10 MAIN, A/C HEAD AND LOADING MOTOR CIRCUIT BOARDS


DANGEROUS VOLTAGE
LIVE BRN
NEUTRAL BLU
PRIMARY
REG
AV
STYLE PIN
TERM
FMA
TUNER
03 MAIN PWB
LPB10048-001D
VSC
SYSCON
CN5001
T5001
CN3011
CN7504

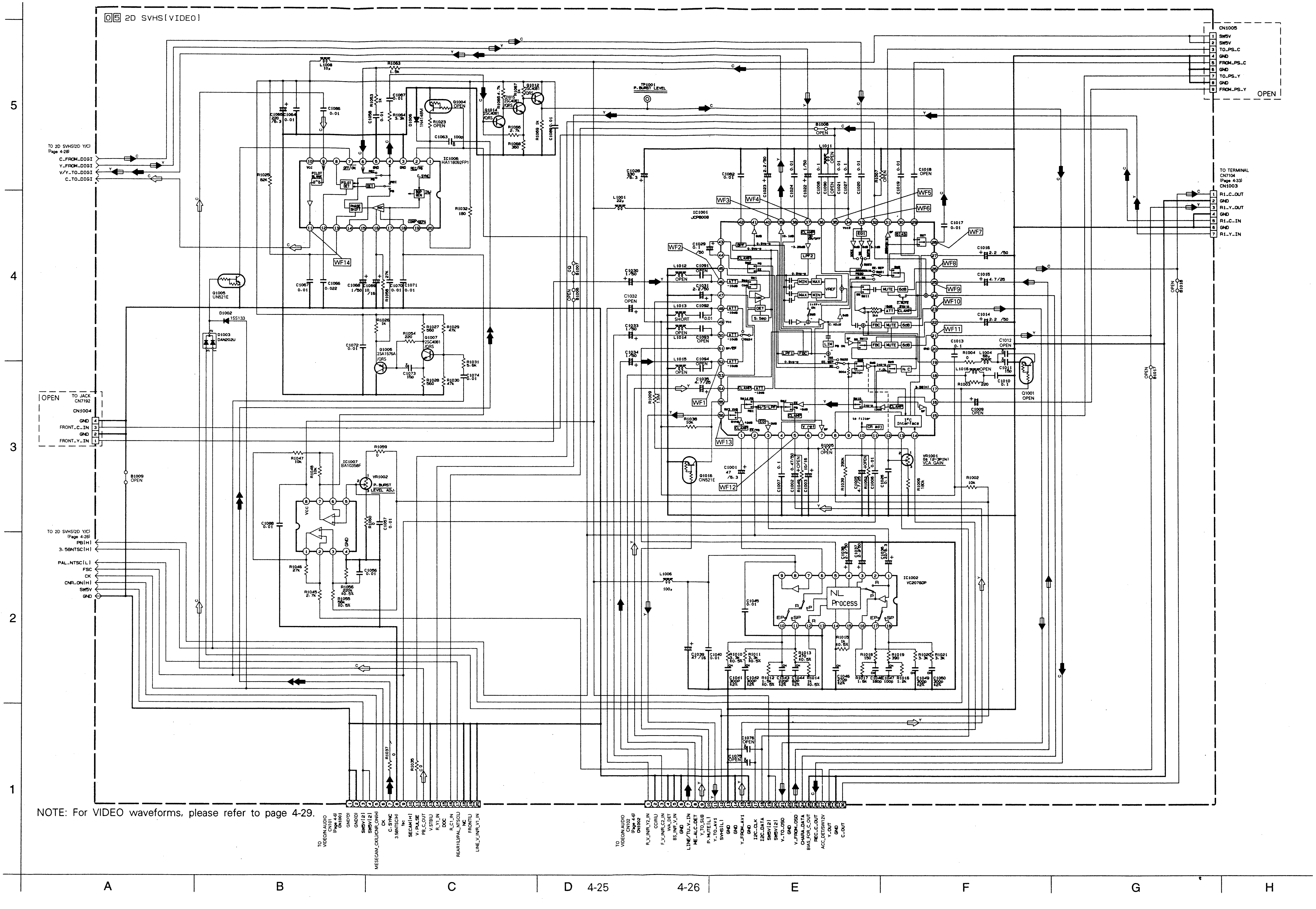
— A/C HEAD —


LPB10010-001A
UL MARK
A/C HEAD PWB
1
2
6
7

— LOADING MOTOR —

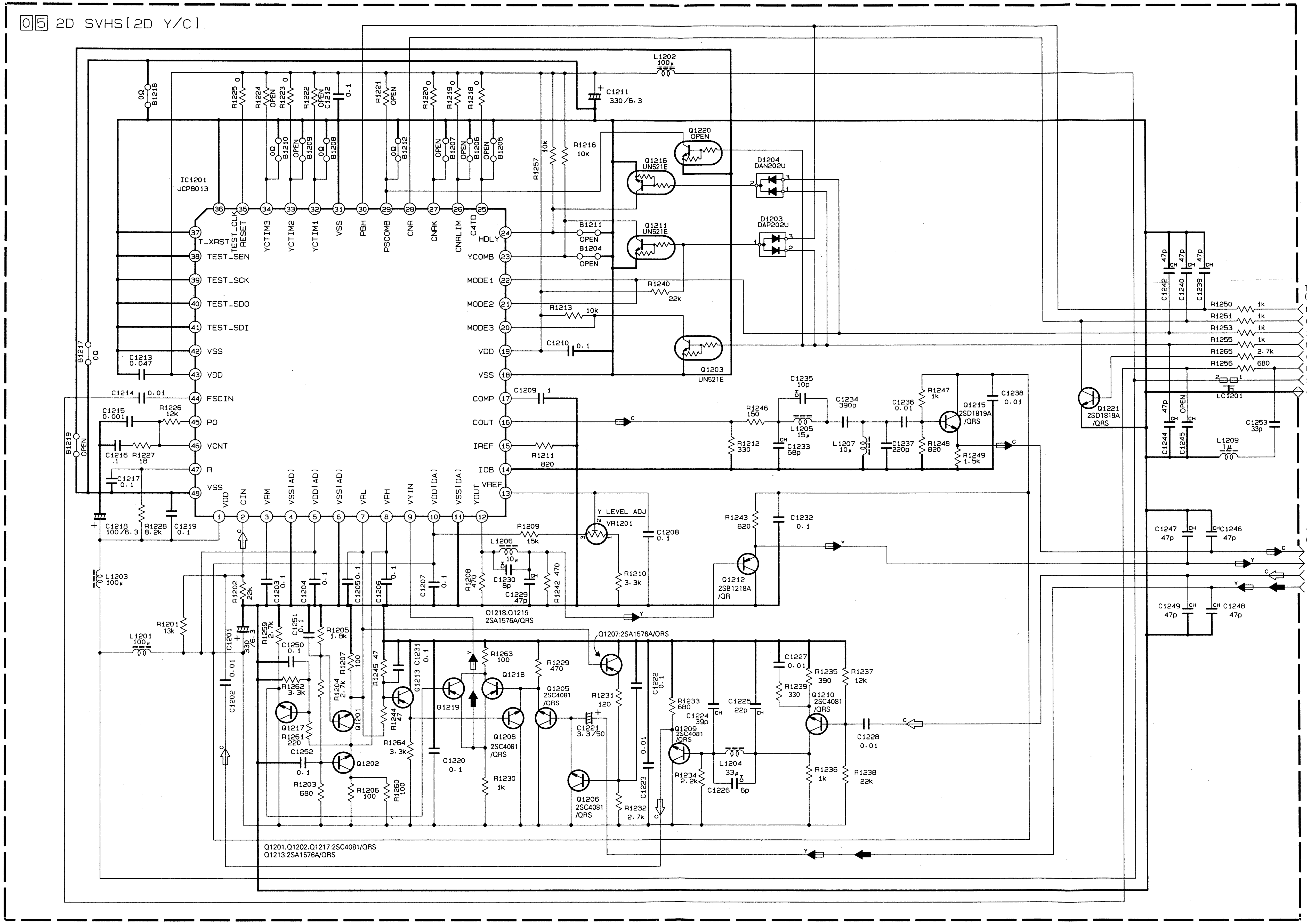

UL MARK
A
55
L.MOTOR PWB ASS'Y
LPB10010-001A

4.11 2D SVHS(VIDEO) SCHEMATIC DIAGRAM


05 2D SVHS[VIDEO]
TO 2D SVHS(2D Y/C)
(Page 4-28)
C_FROM_DIGI
Y_FROM_DIGI
V/Y_TO_DIGI
C_TO_DIGI
CN1005
1 SW5V
2 SW5V
3 TO_PS_C
4 GND
5 FROM_PS_C
6 GND
7 TO_PS_Y
8 GND
9 FROM_PS_Y
OPEN
TO TERMINAL
CN7104
(Page 4-33)
CN1003
1 R1_C_OUT
2 GND
3 R1_Y_OUT
4 GND
5 R1_C_IN
6 GND
7 R1_Y_IN
OPEN
TO JACK
CN7192
CN1004
GND 4
FRONT_C_IN 3
GND 2
FRONT_Y_IN 1
B1009
OPEN
TO 2D SVHS(2D Y/C)
(Page 4-28)
PB[H]
3.58NTSC[H]
PAL_NTSC[L]
FSC
CK
CNR_ON[H]
SW5V
GND
IC1006
HA118092FP1
PILOT BURST
PILOT DET
PHASE SHIFT
IC1001
JCP8008
IC1002
VC2075OP
NL Process
IC1007
BA10358F
VR1002
P. BURST LEVEL ADJ.
TP1001
P. BURST LEVEL
VR1001
VCA GAIN
Q1005
UN521E
Q1016
ON521E
Q1001
OPEN
D1002
1SS133
D1003
DAN202U
Q1004
OPEN
Q1006
2SA1576A
Q1007
2SC4081
Q1014
2SC4081
Q1015
2SC4081
Q1012
2SC4081
D1006
1N4148M
L1008
L1001
L1004
L1006
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
WF10
WF11
WF12
WF13
WF14
TO VIDEO/N.AUDIO CN101 (Page 4-6) CN1001
1 GND(D)
2 GND(D)
3 SW5V[2]
4 SW5V[2]
5 MESECAM_CK(L)/CNR_ON(H)
6 CK
7 C. SYNC
8 3.58NTSC(H)
9 fsc
10 SECAM[H]
11 V. PULSE
12 PB_C_OUT
13 V.STB(L)
14 R_Y1_IN
15 DOC
16 R_C1_IN
17 REAR1(L)/PAL_NTSC(L)
18 NC
19 FRONT(L)
20 LINE_V_IN/R_V1_IN
TO VIDEO/N.AUDIO CN102 (Page 4-6) CN1002
1 R_V_IN/R_Y2_IN
2 CCIR(L)
3 F_V_IN/R_C2_IN
4 WA_DET
5 BS_INF_V_IN
6 GND
7 LINE/TU_V_IN
8 ME_ALC_DET
9 Y_TO_SUB
10 P. MUTE[L]
11 Y_TO_AV1
12 SVHS[L]
13 GND
14 GND
15 Y_FROM_AV1
16 GND
17 I2C_CLK
18 I2C_DATA
19 SW5V[2]
20 SW5V[2]
21 V_TO_OSD
22 GND
23 V_FROM_OSD
24 CHARA_DATA
25 BIAS_FOR_C_OUT
26 REC_C_OUT
27 ACC_DET/SW12V
28 Y_OUT
29 GND
30 C_OUT
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTE: For VIDEO waveforms, please refer to page 4-29.

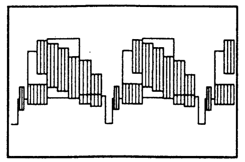
4.12 2D SVHS(2D Y/C) SCHEMATIC DIAGRAM


05 2D SVHS[2D Y/C]
IC1201
JCP8013
T_XRST
TEST_SEN
TEST_SCK
TEST_SDO
TEST_SDI
VSS
VDD
FSCIN
PO
VCNT
R
VSS
TEST_CLK
RESET
YCTIM3
YCTIM2
YCTIM1
VSS
PBH
PSCOMB
CNR
CNRK
CNRLIM
C4TD
HDLY
YCOMB
MODE1
MODE2
MODE3
VDD
VSS
COMP
COUT
IREF
IOB
VREF
VDD
CIN
VRM
VSS(AD)
VDD(AD)
VSS(AD)
VRL
VRH
VYIN
VDD(DA)
VSS(DA)
YOUT
B1218 0Ω
R1225 0
R1224 OPEN
R1223 0
R1222 OPEN
C1212 0.1
R1221 OPEN
R1220 0
R1219 0
R1218 0
B1210 0Ω
B1209 OPEN
B1208 0Ω
B1212 0Ω
B1207 OPEN
B1206 OPEN
B1205 OPEN
L1202 100μ
C1211 330/6.3
R1257 10k
R1216 10k
Q1220 OPEN
Q1216 UN521E
Q1211 UN521E
Q1203 UN521E
D1204 DAN202U
D1203 DAP202U
B1211 OPEN
B1204 OPEN
R1240 22k
R1213 10k
C1210 0.1
B1217 0Ω
B1219 OPEN
C1213 0.047
C1214 0.01
C1215 0.001
R1226 12k
C1216 .1
R1227 18
C1217 0.1
C1218 100/6.3
R1228 8.2k
C1219 0.1
C1209 1
R1211 820
R1246 150
C1235 10p
L1205 15μ
C1234 390p
C1236 0.01
R1247 1k
Q1215 2SD1819A /QRS
C1238 0.01
R1212 330
C1233 68p
L1207 10μ
C1237 220p
R1248 820
R1249 1.5k
Y LEVEL ADJ
VR1201
C1208 0.1
R1210 3.3k
R1209 15k
L1206 10μ
C1230 8p
C1229 47p
R1242 470
R1208 470
C1207 0.1
Q1218,Q1219 2SA1576A/QRS
R1243 820
C1232 0.1
Q1212 2SB1218A /QR
L1203 100μ
R1201 13k
L1201 100μ
R1202 22k
C1201 330/6.3
C1202 0.01
C1203 0.1
C1204 0.1
C1205 0.1
C1206 0.1
R1259 2.7k
C1251 0.1
R1205 1.8k
C1250 0.1
R1262 3.3k
R1204 2.7k
R1207 100
R1245 47
C1231 0.1
Q1213
R1244 47
Q1201
Q1217
R1261 220
C1252 0.1
Q1202
R1203 680
R1206 100
R1260 100
R1264 3.3k
Q1219
C1220 0.1
R1263 100
Q1218
Q1208 2SC4081 /QRS
R1230 1k
R1229 470
Q1205 2SC4081 /QRS
Q1207:2SA1576A/QRS
R1231 120
C1221 3.3/50
Q1206 2SC4081 /QRS
R1232 2.7k
C1222 0.1
C1223 0.01
R1233 680
C1224 39p
Q1209 2SC4081 /QRS
R1234 2.2k
L1204 33μ
C1225 22p
C1226 6p
C1227 0.01
R1235 390
R1239 330
R1237 12k
Q1210 2SC4081 /QRS
C1228 0.01
R1236 1k
R1238 22k
Q1201,Q1202,Q1217:2SC4081/QRS
Q1213:2SA1576A/QRS
Q1221 2SD1819A /QRS
C1242 47p
C1240 47p
C1239 47p
R1250 1k
R1251 1k
R1253 1k
R1255 1k
R1265 2.7k
R1256 680
LC1201
C1244 47p
C1245 OPEN
L1209 1μ
C1253 33p
TO 2D SVHS(VIDEO) (Page 4-25)
PB[H]
CNR_ON[H]
3.58NTSC[H]
PAL_NTSC[L]
CK
FSC
SW5V
GND
C1247 47p
C1246 47p
C1249 47p
C1248 47p
TO 2D SVHS(VIDEO) (Page 4-25)
C_FROM_DIGI
Y_FROM_DIGI
C_TO_DIGI
V/Y_TO_DIGI

WAVEFORMS

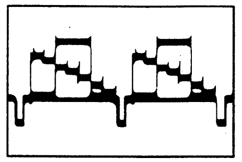
— 2D SVHS(VIDEO) —

WF1 IC1001-52



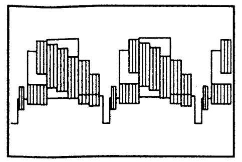
REC 1.0 Vp-p
50 mV/20 µsec/DIV

WF2 IC1001-46



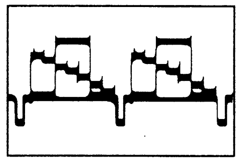
REC 1.0 Vp-p
50 mV/20 µsec/DIV

WF3-1 IC1001-39



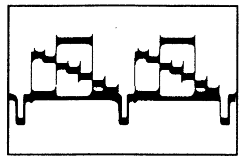
REC 1.8 Vp-p
50 mV/20 µsec/DIV

WF3-2 IC1001-39



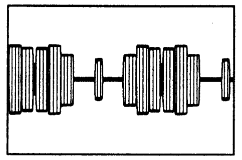
REC/PB 1.7 Vp-p
50 mV/20 µsec/DIV

WF4 IC1001-37



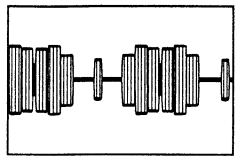
REC/PB 0.8 Vp-p
20 mV/20 µsec/DIV

WF5 IC1001-35



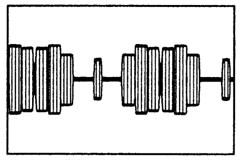
REC 0.65 Vp-p
20 mV/10 µsec/DIV

WF6-1 IC1001-33



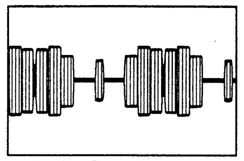
REC 0.35 Vp-p
10 mV/10 µsec/DIV

WF6-2 IC1001-33



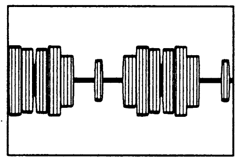
PB 0.48 Vp-p
10 mV/10 µsec/DIV

WF7 IC1001-28



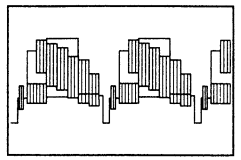
REC 0.7 Vp-p
20 mV/10 µsec/DIV

WF8 IC1001-26



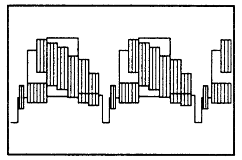
REC/PB 1.4 Vp-p
50 mV/10 µsec/DIV

WF9 IC1001-25



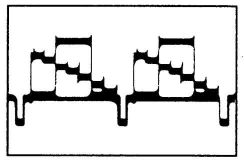
REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF10 IC1001-23



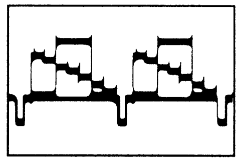
REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF11 IC1001-21



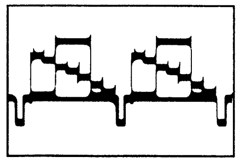
REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF12 IC1001-5



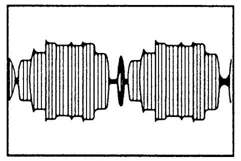
PB 0.56 Vp-p
20 mV/20 µsec/DIV

WF13 IC1001-56



REC/PB 0.57 Vp-p
20 mV/20 µsec/DIV

WF14 IC1006-11

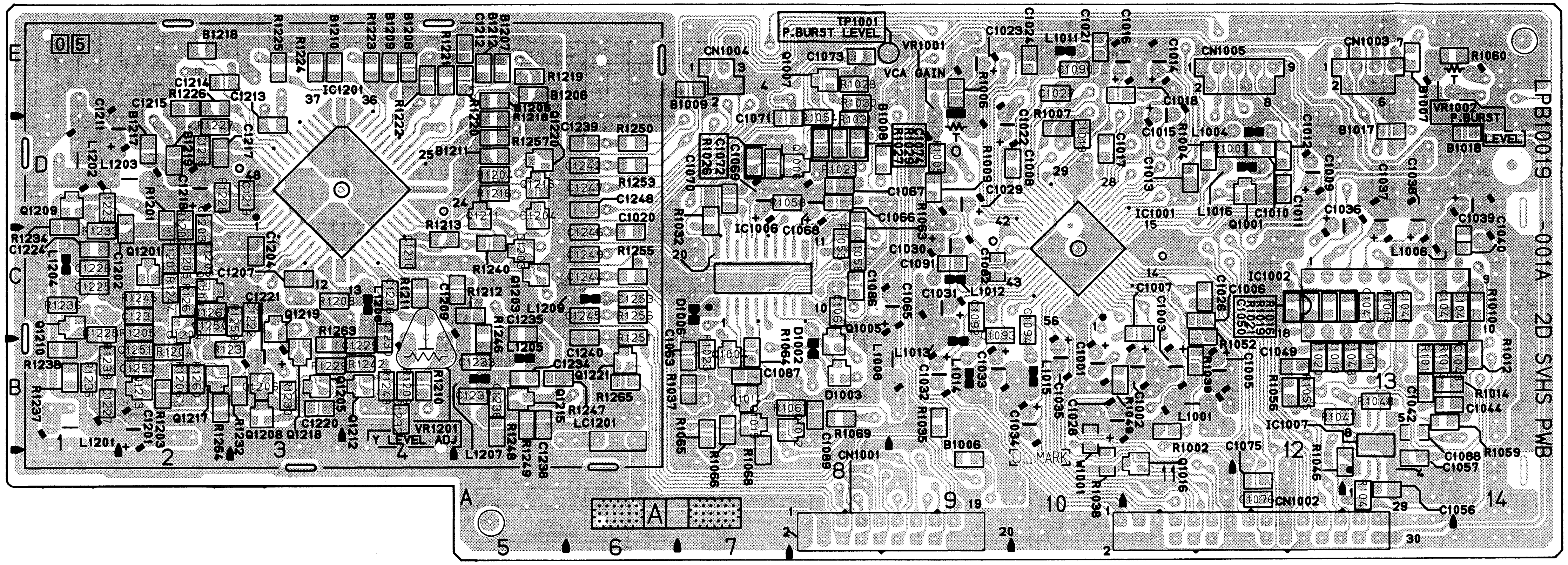


PB 0.55 Vp-p
10 mV/10 µsec/DIV

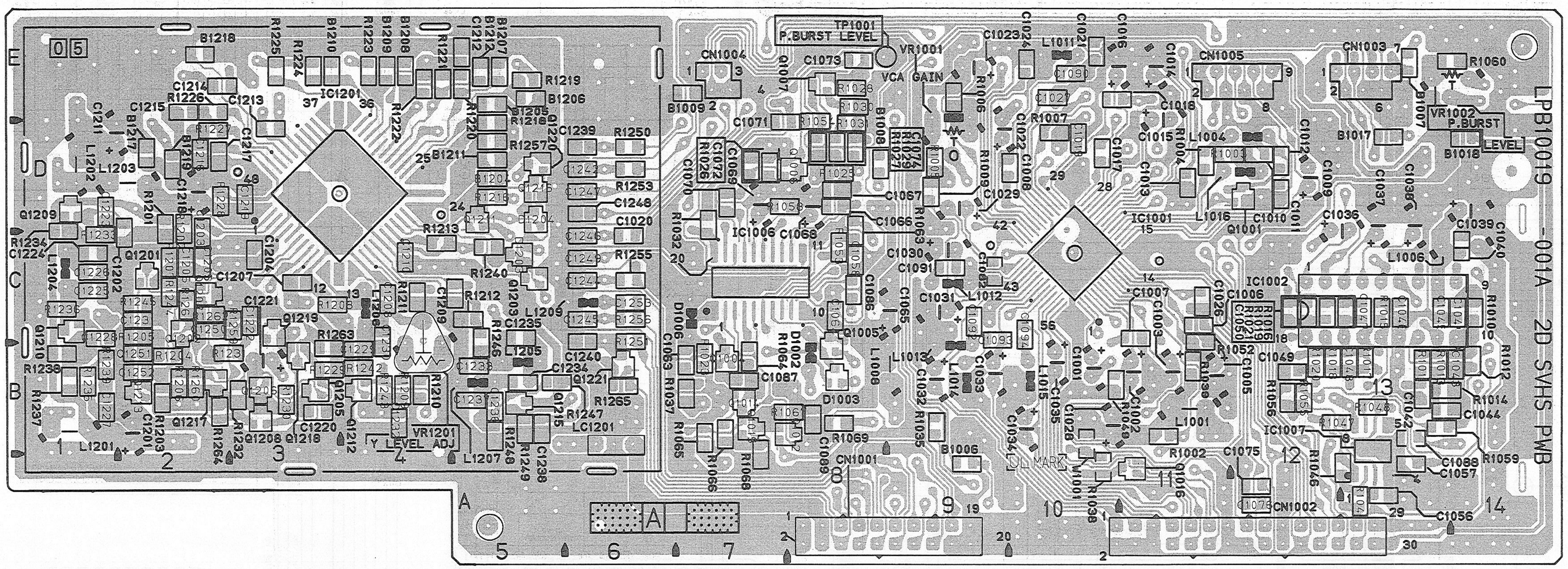
COMPONENT PARTS LOCATION GUIDE <2D SVHS>

REF.NO.	LOCATION		
CAPACITOR			
C1001	A	D	10B
C1002	A	D	11B
C1003	A	D	11B
C1005	A	D	11B
C1006	B	C	11C
C1007	B	C	11C
C1008	B	C	10D
C1009	A	D	12D
C1010	B	C	12D
C1011	B	C	12D
C1012	B	C	12D
C1013	B	C	11D
C1014	A	D	11E
C1015	A	D	11E
C1016	A	D	11E
C1017	B	C	10D
C1018	B	C	10E
C1019	B	C	10D
C1020	B	C	6C
C1021	B	C	10E
C1022	A	D	9D
C1023	A	D	9E
C1024	B	C	10E
C1026	B	C	11C
C1027	B	C	10E
C1028	A	D	10B
C1029	A	D	9D
C1030	A	D	9C
C1031	A	D	9C
C1032	A	D	9B
C1033	A	D	9B
C1034	A	D	10B
C1035	A	D	10B
C1036	A	D	12D
C1037	A	D	13C
C1038	A	D	13C
C1039	A	D	14D
C1040	B	C	14C
C1041	B	C	14C
C1042	B	C	13B
C1043	B	C	14B
C1044	B	C	13B
C1045	B	C	13C
C1046	B	C	13C
C1047	B	C	13C
C1048	B	C	13B
C1049	B	C	12B
C1050	B	C	12C
C1056	B	C	13A
C1057	B	C	13A
C1058	B	C	8C
C1063	B	C	7B
C1064	B	C	8C
C1065	A	D	8C
C1066	B	C	8D
C1067	B	C	8D
C1068	A	D	8D
C1069	A	D	7D
C1070	B	C	7D
C1071	B	C	7D
C1072	B	C	7D
C1073	B	C	8E
C1074	B	C	8D
C1075	B	C	12A
C1076	B	C	12A
C1082	B	C	9C
C1086	B	C	8C
C1087	B	C	7B
C1088	B	C	13B
C1089	B	C	8B
C1090	B	C	10E
C1091	B	C	9C
C1092	B	C	9C
C1093	B	C	9C
C1094	B	C	10C
C1201	A	D	2B
C1202	B	C	2C
C1203	B	C	2C
C1204	B	C	3C
C1205	B	C	2C
C1206	B	C	2C
C1207	B	C	3C
C1208	B	C	4C
C1209	B	C	5C
C1210	B	C	4C
C1211	A	D	2D
C1212	B	C	5E
C1213	B	C	3D
C1214	B	C	2E
C1215	B	C	2E
C1216	B	C	2D
C1217	B	C	2D
C1218	A	D	2D
C1219	B	C	3D
C1220	B	C	3B
C1221	A	D	3B
C1222	B	C	3C
C1223	B	C	1D
C1224	B	C	1C
C1225	B	C	1C
C1226	B	C	1C
C1227	B	C	1B
C1228	B	C	1C
C1229	B	C	4B
C1230	B	C	4C
C1231	B	C	2C
C1232	B	C	4B
C1233	B	C	5B
C1234	B	C	5B
C1235	B	C	5C
C1236	B	C	5B
C1237	B	C	5B
C1238	B	C	5B
C1239	B	C	6D
C1240	B	C	6C
C1242	B	C	6D
C1244	B	C	6C
C1245	B	C	6C
C1246	B	C	6C
C1247	B	C	6D
C1248	B	C	6D
C1249	B	C	6C
C1250	B	C	2C
C1251	B	C	2B
C1252	B	C	2B
C1253	B	C	6C
CONNECTOR			
CN1001	A	D	8A
CN1002	A	D	11A
CN1003	A	D	12E
CN1004	A	D	7E
CN1005	A	D	11E
DIODE			
D1002	A	D	8B
D1003	B	C	8B
D1006	A	D	7C
D1203	B	C	5C
D1204	B	C	5D
IC			
IC1001	B	C	10C
IC1002	A	D	12C
IC1006	B	C	7C
IC1007	B	C	13B
IC1201	B	C	4D
COIL			
L1001	A	D	11B
L1004	A	D	12D
L1006	A	D	14C
L1008	A	D	8B
L1011	A	D	10E
L1012	A	D	9C
L1013	A	D	9B
L1014	A	D	9B
L1015	A	D	10B
L1016	A	D	12D
L1201	A	D	1B
L1202	A	D	1D
L1203	A	D	2D
L1204	A	D	1C
L1205	A	D	5B
L1206	A	D	4C
L1207	A	D	5B
L1209	A	D	6C
TRANSISTOR			
Q1001	B	C	12D
Q1004	B	C	7B
Q1005	B	C	8B
Q1006	B	C	8D
Q1007	B	C	8E
Q1012	B	C	8B
Q1014	B	C	7B
Q1015	B	C	7B
Q1016	B	C	11A
Q1201	B	C	2C
Q1202	B	C	2C
Q1203	B	C	5C
Q1205	B	C	3B
Q1206	B	C	3B
Q1207	B	C	2C
Q1208	B	C	3B
Q1209	B	C	1D
Q1210	B	C	1C
Q1211	B	C	5D
Q1212	B	C	4B
Q1213	B	C	2B
Q1215	B	C	5B
Q1216	B	C	5D
Q1217	B	C	2B
Q1218	B	C	3B
Q1219	B	C	3C
Q1220	B	C	5D
Q1221	B	C	6B
RESISTOR			
R1002	B	C	11B
R1003	B	C	11D
R1004	B	C	11D
R1005	B	C	9D
R1006	B	C	9E
R1007	B	C	10D
R1009	B	C	9D
R1010	B	C	14C
R1011	B	C	13B
R1012	B	C	14B
R1013	B	C	13B
R1014	B	C	13B
R1015	B	C	13C
R1016	B	C	13C
R1017	B	C	13B
R1018	B	C	12B
R1019	B	C	12C
R1020	B	C	12B
R1021	B	C	12C
R1023	B	C	7B
R1025	B	C	8D
R1026	B	C	7D
R1027	B	C	8D
R1028	B	C	8E
R1029	B	C	8D
R1030	B	C	8E
R1031	B	C	8D
R1032	B	C	7D
R1035	B	C	9B
R1037	B	C	7B
R1038	B	C	10A
R1039	B	C	11B
R1045	B	C	13A
R1046	B	C	13A
R1047	B	C	12B
R1048	B	C	13B
R1049	B	C	10B
R1052	B	C	11C
R1053	B	C	8C
R1054	B	C	8D
R1055	B	C	12B
R1056	B	C	12B
R1058	B	C	7D
R1059	B	C	13B
R1060	B	C	14E
R1063	B	C	8D
R1064	B	C	7B
R1065	B	C	7B
R1066	B	C	7B
R1067	B	C	8B
R1068	B	C	7A
R1069	B	C	8B
R1201	B	C	2D
R1202	B	C	2D
R1203	B	C	2B
R1204	B	C	2B
R1205	B	C	2C
R1206	B	C	2B
R1207	B	C	2C
R1208	B	C	3C
R1209	B	C	4B
R1210	B	C	4B
R1211	B	C	4C
R1212	B	C	5C
R1213	B	C	4C
R1216	B	C	5D
R1218	B	C	5D
R1219	B	C	5E
R1220	B	C	5E
R1221	B	C	4E
R1222	B	C	4E
R1223	B	C	4E
R1224	B	C	3E
R1225	B	C	3E
R1226	B	C	2E
R1227	B	C	2D
R1228	B	C	2D
R1229	B	C	3B
R1230	B	C	3B
R1231	B	C	3B
R1232	B	C	3B
R1233	B	C	1C
R1234	B	C	1D
R1235	B	C	1B
R1236	B	C	1C
R1237	B	C	1B
R1238	B	C	1B
R1239	B	C	1B
R1240	B	C	5C
R1242	B	C	4B
R1243	B	C	4B
R1244	B	C	2C
R1245	B	C	2C
R1246	B	C	5B
R1247	B	C	5B
R1248	B	C	5B
R1249	B	C	5B
R1250	B	C	6D
R1251	B	C	6C
R1253	B	C	6D
R1255	B	C	6C
R1256	B	C	6C
R1257	B	C	5D
R1259	B	C	3C
R1260	B	C	2B
R1261	B	C	2C
R1262	B	C	2C
R1263	B	C	3B
R1264	B	C	2B
R1265	B	C	6B
OTHER			
TP1001	A	D	8E
VR1001	A	D	9D
VR1002	A	D	14E
VR1201	A	D	4C
LC1201	A	D	6B

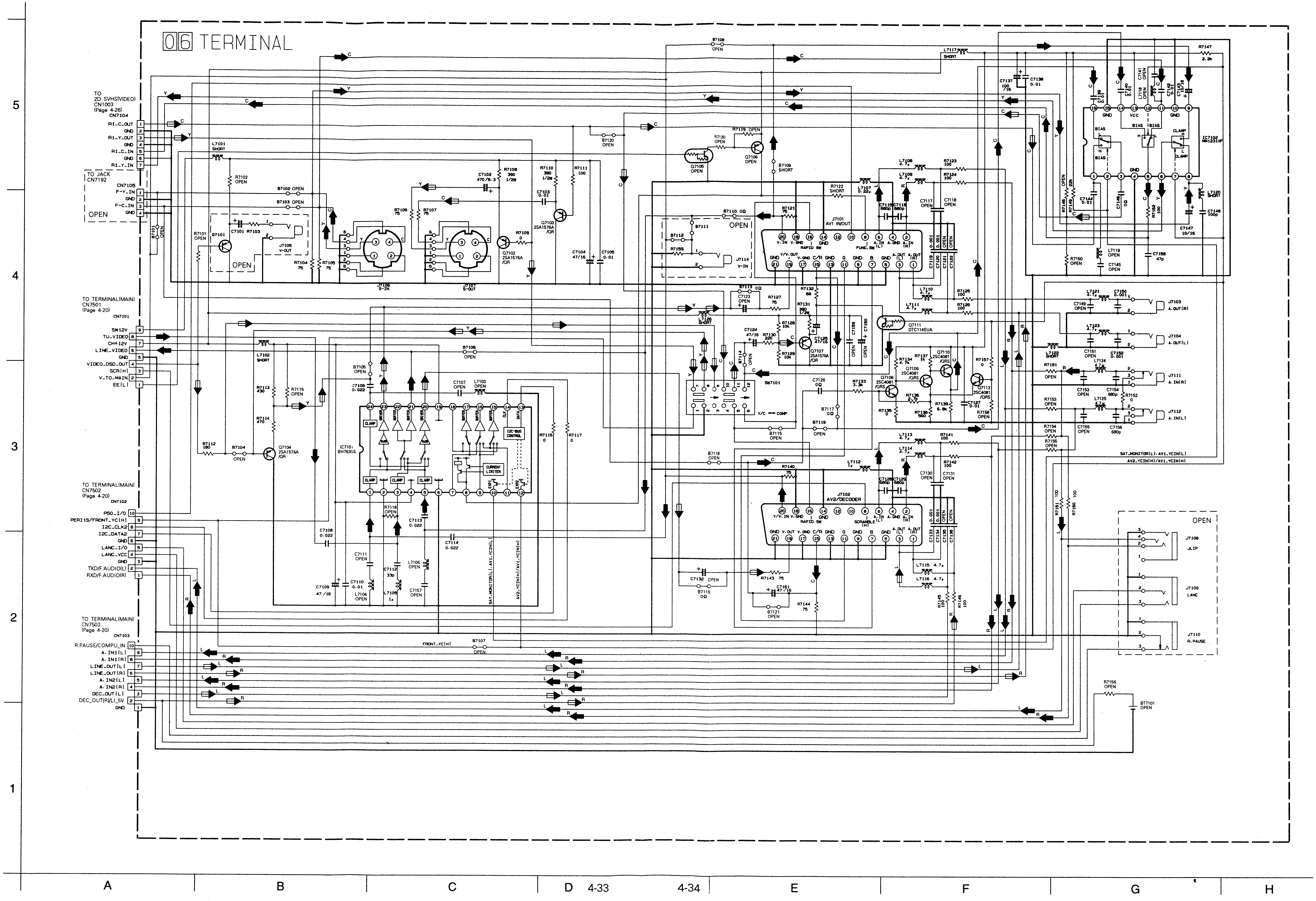
4.13 2D SVHS CIRCUIT BOARD


LPB10019-001A 2D SVHS PWB
TP1001
P.BURST LEVEL
VR1001
VCA GAIN
VR1002
P.BURST LEVEL
VR1201
Y LEVEL ADJ
IC1201
IC1001
IC1002
IC1006
IC1007
CN1001
CN1002
CN1003
CN1004
CN1005
MARK
A
B
C
D
E
1
2
3
4
5
6
7
8
9
10
11
12
13
14

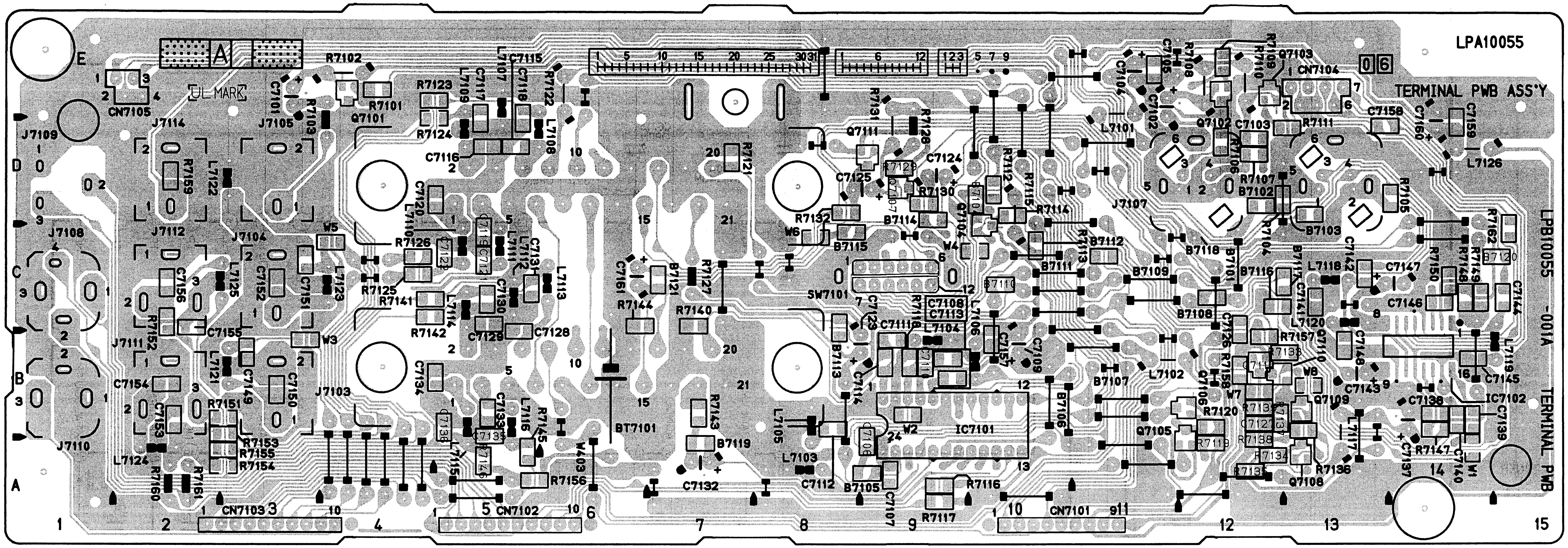
4.13 2D SVHS CIRCUIT BOARD


LPB10019 - 001A 2D SVHS PWB
TP1001 P.BURST LEVEL
VR1001 VCA GAIN
VR1002 P.BURST LEVEL
VR1201 Y LEVEL ADJ
IC1201
IC1001
IC1002
IC1006
IC1007
CN1001
CN1002
CN1003
CN1004
CN1005
OLIMARZ
A
B
C
D
E
1
2
3
4
5
6
7
8
9
10
11
12
13
14

4.14 TERMINAL SCHEMATIC DIAGRAM


06 TERMINAL
TO 2D SVHS(VIDEO) CN1003 (Page 4-26)
CN7104
R1_C_OUT
GND
R1_Y_OUT
GND
R1_C_IN
GND
R1_Y_IN
TO JACK CN7192
CN7105
F-Y_IN
GND
F-C_IN
GND
OPEN
TO TERMINAL(MAIN) CN7501 (Page 4-20)
CN7101
SW12V
TU_VIDEO
CH+12V
LINE_VIDEO
GND
VIDEO_OSD_OUT
SCR(H)
V_TO_MAIN
EE(L)
TO TERMINAL(MAIN) CN7502 (Page 4-20)
CN7102
P50_I/O
PERI1S/FRONT_YC(H)
I2C_CLK2
I2C_DATA2
GND
LANC_I/O
LANC_VCC
GND
TXD/F.AUDIO(L)
RXD/F.AUDIO(R)
TO TERMINAL(MAIN) CN7503 (Page 4-20)
CN7103
R.PAUSE/COMPU_IN
A.IN1(L)
A.IN1(R)
LINE_OUT(L)
LINE_OUT(R)
A.IN2(L)
A.IN2(R)
DEC_OUT(L)
DEC_OUT(R)/L1_5V
GND
J7106 S-IN
J7107 S-OUT
J7105 V-OUT
J7114 V-IN
IC7101 BH7635S
CLAMP
BUFFER
I2C-BUS CONTROL
CURRENT LIMITER
J7101 AV1 IN/OUT
J7102 AV2/DECODER
RAPID SW
FUNC.SW
SCRAMBLE
SW7101
Y/C ⇐ COMP
IC7102 MM1231XF
BIAS
CLAMP
VCC
GND
Q7101
Q7102 2SA1576A /QR
Q7103 2SA1576A /QR
Q7104 2SA1576A /QR
Q7105
Q7106
Q7107 2SA1576A /QR
Q7108 2SC4081 /QRS
Q7109 2SC4081 /QRS
Q7110 2SC4081 /QRS
Q7111 DTC114EUA
Q7112 2SC4081 /QRS
J7103 A.OUT(R)
J7104 A.OUT(L)
J7111 A.IN(R)
J7112 A.IN(L)
SAT_MONITOR(L)/AV1_YCIN(L)
AV2_YCIN(H)/AV1_YCIN(H)
FRONT_YC(H)
J7108 JLIP
J7109 LANC
J7110 R.PAUSE
BT7101 OPEN
R7156 OPEN
A
B
C
D
E
F
G
H
1
2
3
4
5

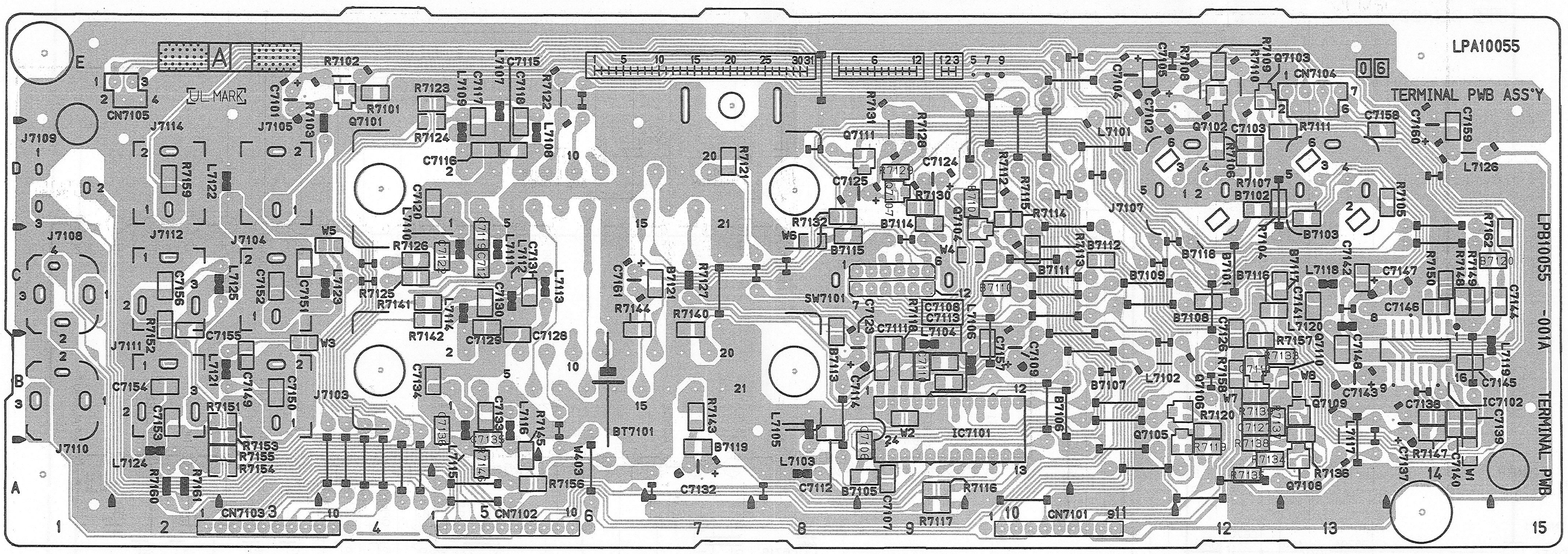
4.15 TERMINAL CIRCUIT BOARD



COMPONENT PARTS LOCATION GUIDE <TERMINAL>

REF.NO.	LOCATION		
CAPACITOR			
C7101	A	D	3E
C7102	A	D	11E
C7103	B	C	12D
C7104	A	D	11E
C7105	B	C	11E
C7106	B	C	9A
C7107	B	C	9A
C7108	B	C	9B
C7109	A	D	10B
C7110	B	C	9B
C7111	B	C	9B
C7112	B	C	8B
C7113	B	C	9B
C7114	B	C	9B
C7115	B	C	5D
C7116	B	C	5D
C7117	B	C	5E
C7118	B	C	5E
C7119	B	C	5C
C7120	B	C	5D
C7121	B	C	5C
C7122	B	C	5C
C7123	A	D	9B
C7124	A	D	9D
C7125	A	D	9D
C7126	B	C	12C
C7127	B	C	12B
C7128	B	C	5C
C7129	B	C	5C
C7130	B	C	5C
C7131	B	C	5C
C7132	A	D	7A
C7133	B	C	5B
C7134	B	C	5B
C7135	B	C	5B
C7136	B	C	5B
C7137	A	D	14B
C7138	B	C	14B
C7139	B	C	14B
C7140	B	C	14B
C7141	B	C	13C
C7142	B	C	13C
C7143	A	D	13B
C7144	B	C	15C
C7145	B	C	14B
C7146	B	C	14C
C7147	A	D	13C
C7148	B	C	13B
C7149	B	C	3B
C7150	B	C	3B
C7151	B	C	3C
C7152	B	C	3C
C7153	B	C	2B
C7154	B	C	2B
C7155	B	C	2C
C7156	B	C	2C
C7157	B	C	10B
C7158	B	C	13D
C7159	B	C	14D
C7160	A	D	14D
C7161	A	D	6C
CONNECTOR			
CN7101	A	D	10A
CN7102	A	D	5A
CN7103	A	D	2A
CN7104	A	D	13E
CN7105	A	D	2E
IC			
IC7101	A	D	9B
IC7102	B	C	14B
JACK			
J7101	A	D	6D
J7102	A	D	6B
J7103	A	D	3B
J7104	A	D	3C
J7105	A	D	3D
J7106	A	D	13D
J7107	A	D	12D
J7108	A	D	1C
J7109	A	D	1D
J7110	A	D	1B
J7111	A	D	2B
J7112	A	D	2C
J7114	A	D	2D
COIL			
L7101	A	D	11E
L7102	A	D	12B
L7103	A	D	8A
L7104	A	D	9B
L7105	A	D	8A
L7106	A	D	10B
L7107	A	D	5E
L7108	A	D	5D
L7109	A	D	5D
L7110	A	D	5C
L7111	A	D	5C
L7112	A	D	5C
L7113	A	D	6C
L7114	A	D	5C.
L7115	A	D	5B
L7116	A	D	5B
L7117	A	D	13A
L7118	A	D	13C
L7119	A	D	15B
L7120	A	D	13C
L7121	A	D	3B
L7122	A	D	3D
L7123	A	D	4C
L7124	A	D	2A
L7125	A	D	3C
L7126	A	D	14D
TRANSISTOR			
Q7101	B	C	4E
Q7102	B	C	12E
Q7103	B	C	12E
Q7104	B	C	10D
Q7105	B	C	12B
Q7106	B	C	12B
Q7107	B	C	9D
Q7108	B	C	13A
Q7109	B	C	13B
Q7110	B	C	12B
Q7111	B	C	9D
Q7112	B	C	12B
RESISTOR			
R7101	B	C	4E
R7102	A	D	3E
R7103	A	D	3E
R7104	B	C	12D
R7105	B	C	14D
R7106	B	C	12D
R7107	B	C	12D
R7108	A	D	12E
R7109	B	C	12E
R7110	A	D	12E
R7111	B	C	13D
R7112	B	C	10D
R7113	B	C	10C
R7114	B	C	10D
R7115	A	D	10C
R7116	B	C	9A
R7117	B	C	9A
R7118	B	C	9B
R7119	B	C	12A
R7120	B	C	12B
R7121	B	C	7D
R7122	A	D	6E
R7123	B	C	5E
R7124	B	C	5E
R7125	B	C	4C
R7126	B	C	4C
R7127	A	D	7C
R7128	A	D	9E
R7129	B	C	9D
R7130	B	C	9D
R7131	A	D	9D
R7132	B	C	8D
R7133	B	C	13B
R7134	B	C	12A
R7135	B	C	12A
R7136	B	C	13B
R7137	B	C	12B
R7138	B	C	12A
R7139	B	C	12B
R7140	B	C	7C
R7141	B	C	4C
R7142	B	C	4C
R7143	B	C	7B
R7144	B	C	6C
R7145	B	C	5A
R7146	B	C	5A
R7147	B	C	14B
R7148	B	C	14C
R7149	B	C	14C
R7150	B	C	14C
R7151	B	C	3B
R7152	B	C	2C
R7153	B	C	3B
R7154	B	C	3A
R7155	B	C	3A
R7156	B	C	5A
R7157	B	C	12B
R7158	B	C	12B
R7159	B	C	2D
R7160	A	D	2A
R7161	A	D	2A
R7162	B	C	15C
OTHER			
BT7101	A	D	6B
SW7101	A	D	9C

4.15 TERMINAL CIRCUIT BOARD


LPA10055
TERMINAL PWB ASS'Y
LPB10055 -001A TERMINAL PWB
UL MARK
A
E
D
C
B
1
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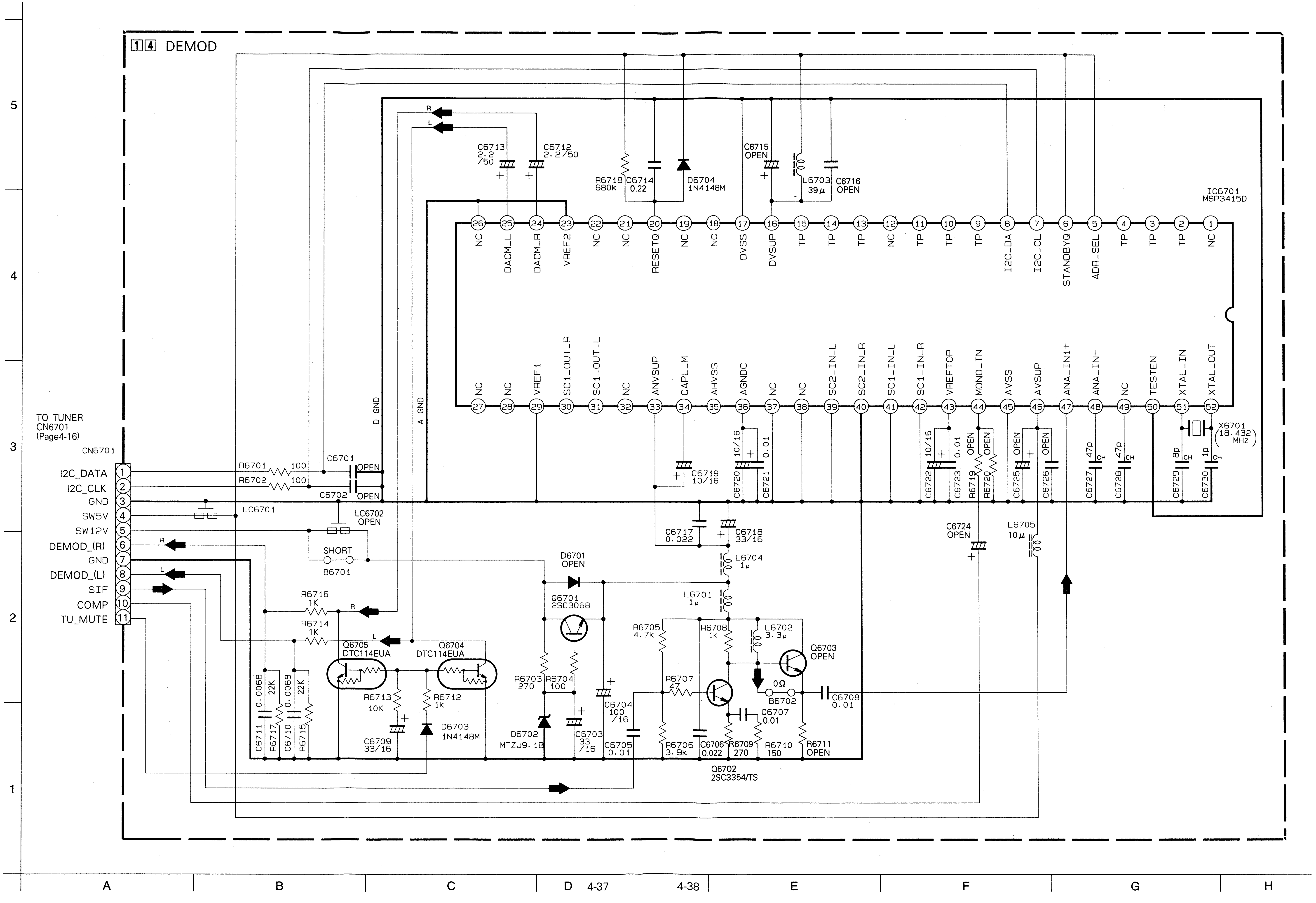
3
4
5
6
7
8
9
10
11
12
13
14
15
CN7101
CN7102
CN7103
CN7104
CN7105
IC7101
IC7102
SW7101
BT7101
J7101
J7102
J7103
J7104
J7105
J7106
J7107
J7108
J7109
J7110
J7111
J7112
J7114
Q7101
Q7102
Q7103
Q7104
Q7105
Q7106
Q7107
Q7108
Q7109
Q7110
Q7111
W1
W2
W3
W4
W5
W6
W7
W8
W403

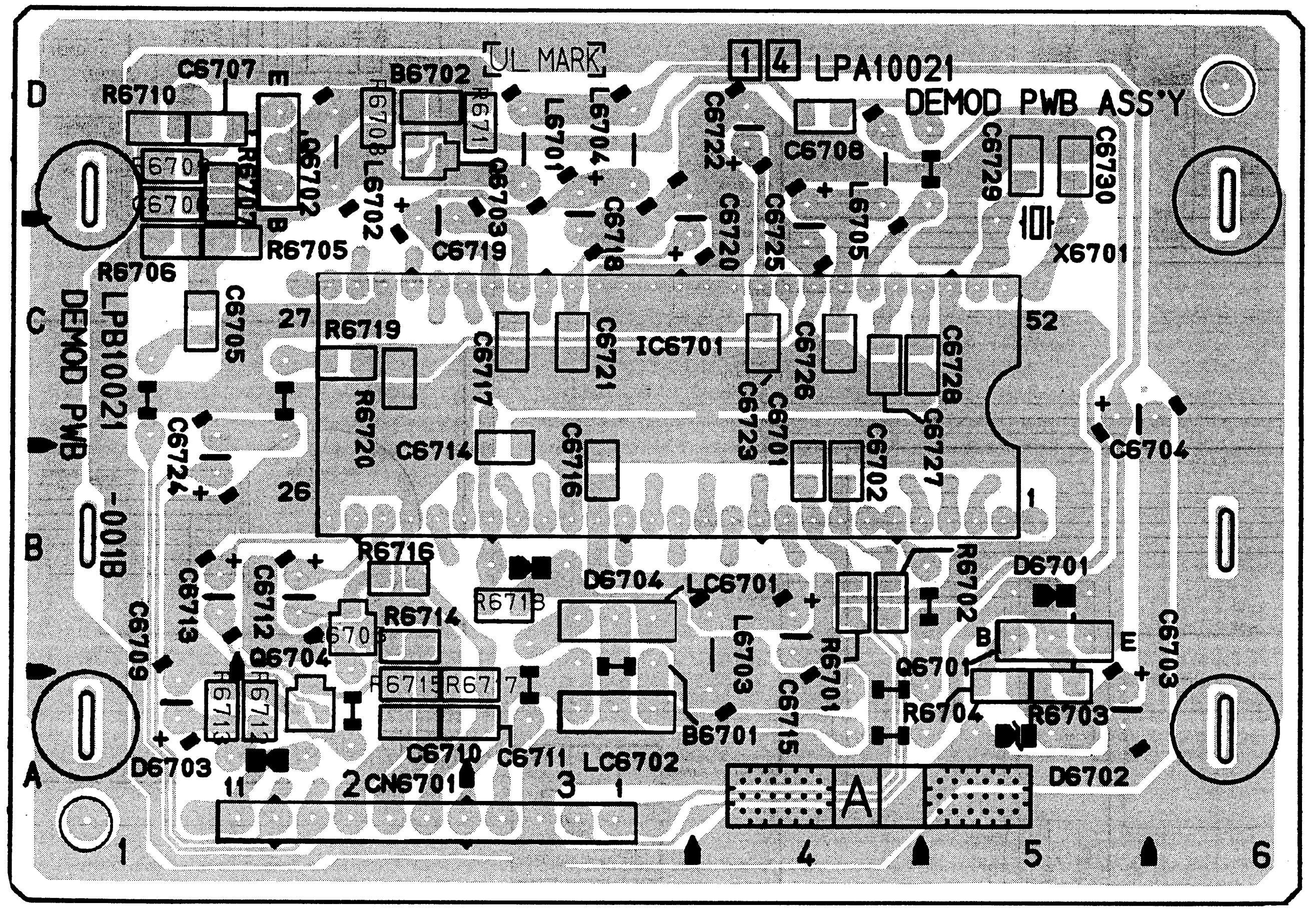
COMPONENT PARTS LOCATION GUIDE <TERMINAL>

REF.NO.	LOCATION		
CAPACITOR			
C7101	A	D	3E
C7102	A	D	11E
C7103	B	C	12D
C7104	A	D	11E
C7105	B	C	11E
C7106	B	C	9A
C7107	B	C	9A
C7108	B	C	9B
C7109	A	D	10B
C7110	B	C	9B
C7111	B	C	9B
C7112	B	C	8B
C7113	B	C	9B
C7114	B	C	9B
C7115	B	C	5D
C7116	B	C	5D
C7117	B	C	5E
C7118	B	C	5E
C7119	B	C	5C
C7120	B	C	5D
C7121	B	C	5C
C7122	B	C	5C
C7123	A	D	9B
C7124	A	D	9D
C7125	A	D	9D
C7126	B	C	12C
C7127	B	C	12B
C7128	B	C	5C
C7129	B	C	5C
C7130	B	C	5C
C7131	B	C	5C
C7132	A	D	7A
C7133	B	C	5B
C7134	B	C	5B
C7135	B	C	5B
C7136	B	C	5B
C7137	A	D	14B
C7138	B	C	14B
C7139	B	C	14B
C7140	B	C	14B
C7141	B	C	13C
C7142	B	C	13C
C7143	A	D	13B
C7144	B	C	15C
C7145	B	C	14B
C7146	B	C	14C
C7147	A	D	13C
C7148	B	C	13B
C7149	B	C	3B
C7150	B	C	3B
C7151	B	C	3C
C7152	B	C	3C
C7153	B	C	2B
C7154	B	C	2B
C7155	B	C	2C
C7156	B	C	2C
C7157	B	C	10B
C7158	B	C	13D
C7159	B	C	14D
C7160	A	D	14D
C7161	A	D	6C
CONNECTOR			
CN7101	A	D	10A
CN7102	A	D	5A
CN7103	A	D	2A
CN7104	A	D	13E
CN7105	A	D	2E
IC			
IC7101	A	D	9B
IC7102	B	C	14B
JACK			
J7101	A	D	6D
J7102	A	D	6B
J7103	A	D	3B
J7104	A	D	3C
J7105	A	D	3D
J7106	A	D	13D
J7107	A	D	12D
J7108	A	D	1C
J7109	A	D	1D
J7110	A	D	1B
J7111	A	D	2B
J7112	A	D	2C
J7114	A	D	2D
COIL			
L7101	A	D	11E
L7102	A	D	12B
L7103	A	D	8A
L7104	A	D	9B
L7105	A	D	8A
L7106	A	D	10B
L7107	A	D	5E
L7108	A	D	5D
L7109	A	D	5D
L7110	A	D	5C
L7111	A	D	5C
L7112	A	D	5C
L7113	A	D	6C
L7114	A	D	5C.
L7115	A	D	5B
L7116	A	D	5B
L7117	A	D	13A
L7118	A	D	13C
L7119	A	D	15B
L7120	A	D	13C
L7121	A	D	3B
L7122	A	D	3D
L7123	A	D	4C
L7124	A	D	2A
L7125	A	D	3C
L7126	A	D	14D
TRANSISTOR			
Q7101	B	C	4E
Q7102	B	C	12E
Q7103	B	C	12E
Q7104	B	C	10D
Q7105	B	C	12B
Q7106	B	C	12B
Q7107	B	C	9D
Q7108	B	C	13A
Q7109	B	C	13B
Q7110	B	C	12B
Q7111	B	C	.9D
Q7112	B	C	12B
RESISTOR			
R7101	B	C	4E
R7102	A	D	3E
R7103	A	D	3E
R7104	B	C	12D
R7105	B	C	14D
R7106	B	C	12D
R7107	B	C	12D
R7108	A	D	12E
R7109	B	C	12E
R7110	A	D	12E
R7111	B	C	13D
R7112	B	C	10D
R7113	B	C	10C
R7114	B	C	10D
R7115	A	D	10C
R7116	B	C	9A
R7117	B	C	9A
R7118	B	C	9B
R7119	B	C	12A
R7120	B	C	12B
R7121	B	C	7D
R7122	A	D	6E
R7123	B	C	5E
R7124	B	C	5E
R7125	B	C	4C
R7126	B	C	4C
R7127	A	D	7C
R7128	A	D	9E
R7129	B	C	9D
R7130	B	C	9D
R7131	A	D	9D
R7132	B	C	8D
R7133	B	C	13B
R7134	B	C	12A
R7135	B	C	12A
R7136	B	C	13B
R7137	B	C	12B
R7138	B	C	12A
R7139	B	C	12B
R7140	B	C	7C
R7141	B	C	4C
R7142	B	C	4C
R7143	B	C	7B
R7144	B	C	6C
R7145	B	C	5A
R7146	B	C	5A
R7147	B	C	14B
R7148	B	C	14C
R7149	B	C	14C
R7150	B	C	14C
R7151	B	C	3B
R7152	B	C	2C
R7153	B	C	3B
R7154	B	C	3A
R7155	B	C	3A
R7156	B	C	5A
R7157	B	C	12B
R7158	B	C	12B
R7159	B	C	2D
R7160	A	D	2A
R7161	A	D	2A
R7162	B	C	15C
OTHER			
BT7101	A	D	6B
SW7101	A	D	9C

4.16 DEMODULATOR SCHEMATIC DIAGRAM


1 4 DEMOD
IC6701
MSP3415D
NC
DACM_L
DACM_R
VREF2
NC
NC
RESETQ
NC
NC
DVSS
DVSUP
TP
TP
TP
NC
TP
TP
TP
I2C_DA
I2C_CL
STANDBYQ
ADR_SEL
TP
TP
TP
NC
NC
NC
VREF1
SC1_OUT_R
SC1_OUT_L
NC
ANVSUP
CAPL_M
AHVSS
AGNDC
NC
NC
SC2_IN_L
SC2_IN_R
SC1_IN_L
SC1_IN_R
VREFTOP
MONO_IN
AVSS
AVSUP
ANA_IN1+
ANA_IN-
NC
TESTEN
XTAL_IN
XTAL_OUT
C6713 2.2 /50
C6712 2.2/50
R6718 680k
C6714 0.22
D6704 1N4148M
C6715 OPEN
L6703 39µ
C6716 OPEN
R
L
D GND
A GND
TO TUNER
CN6701
(Page4-16)
CN6701
I2C_DATA
I2C_CLK
GND
SW5V
SW12V
DEMOD_(R)
GND
DEMOD_(L)
SIF
COMP
TU_MUTE
R6701 100
R6702 100
C6701 OPEN
C6702 OPEN
LC6701
LC6702 OPEN
SHORT
B6701
R6716 1K
R6714 1K
Q6705 DTC114EUA
Q6704 DTC114EUA
R6713 10K
R6712 1k
C6709 33/16
D6703 1N4148M
C6711 0.0068
R6717 22K
C6710 0.0068
R6715 22K
D6701 OPEN
Q6701 2SC3068
R6703 270
R6704 100
D6702 MTZJ9.1B
C6703 33 /16
C6704 100 /16
C6705 0.01
C6719 10/16
C6717 0.022
C6718 33/16
L6704 1µ
L6701 1µ
R6705 4.7k
R6708 1k
L6702 3.3µ
Q6703 OPEN
R6707 47
0Ω
B6702
C6707 0.01
C6708 0.01
R6706 3.9k
C6706 0.022
R6709 270
R6710 150
R6711 OPEN
Q6702 2SC3354/TS
C6720 10/16
C6721 0.01
C6722 10/16
C6723 0.01
R6719 OPEN
R6720 OPEN
C6725 OPEN
C6726 OPEN
C6727 47p CH
C6728 47p CH
C6729 8p CH
C6730 1p CH
X6701 (18.432 MHz)
C6724 OPEN
L6705 10µ
1
2
3
4
5
A
B
C
D
E
F
G
H

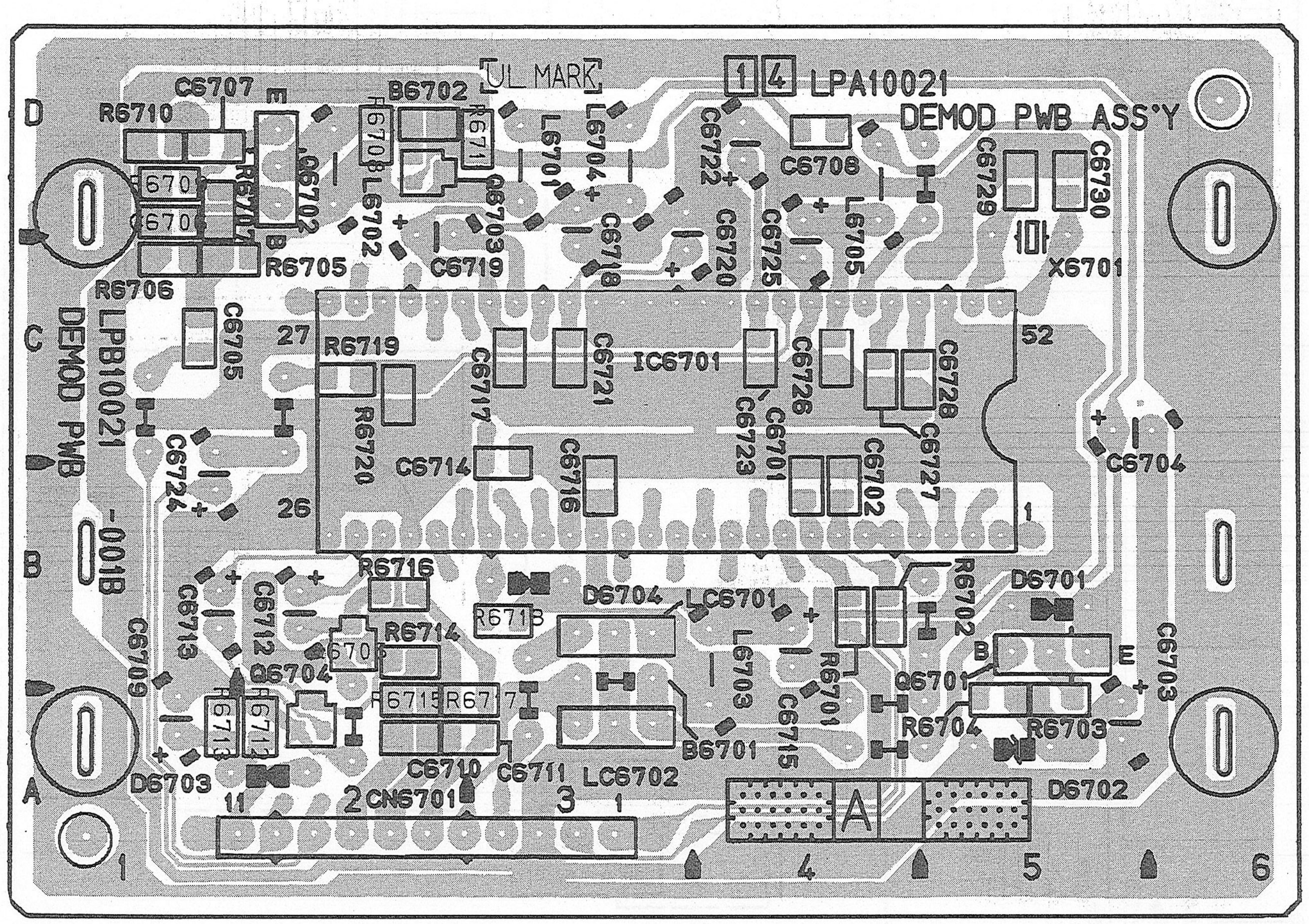
4.17 DEMODULATOR CIRCUIT BOARD


UL MARK
1 4 LPA10021
DEMOD PWB ASS'Y
LPB10021
DEMOD PWB
-001B
D
C
B
A
1
2
3
4
5
6
R6710
C6707
B6702
R6705
R6706
C6705
R6719
R6720
C6714
C6716
C6717
C6721
IC6701
C6723
C6726
C6701
C6702
C6727
C6728
C6708
C6729
C6730
X6701
C6704
C6703
C6724
C6719
C6718
C6720
C6722
C6725
L6701
L6702
L6704
L6705
Q6702
Q6703
R6716
R6714
R6718
D6704
LC6701
L6703
R6701
R6702
D6701
Q6701
R6704
R6703
C6715
B6701
C6713
C6712
C6709
Q6704
D6703
CN6701
C6710
C6711
LC6702
D6702
27
52
26
1
E
B

COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

REF.NO.	LOCATION		
CAPACITOR			
C6701	B	C	4B
C6702	B	C	4B
C6703	A	D	5A
C6704	A	D	5C
C6705	B	C	1C
C6706	B	C	1D
C6707	B	C	1D
C6708	B	C	4D
C6709	A	D	1A
C6710	B	C	2A
C6711	B	C	3A
C6712	A	D	2B
C6713	A	D	1B
C6714	B	C	3C
C6715	A	D	4B
C6716	B	C	3B
C6717	B	C	3C
C6718	A	D	3D
C6719	A	D	2D
C6720	A	D	4C
C6721	B	C	3C
C6722	A	D	4D
C6723	B	C	4C
C6724	A	D	1B
C6725	A	D	4D
C6726	B	C	4C
C6727	B	C	4C
C6728	B	C	5C
C6729	B	C	5D
C6730	B	C	5D
CONNECTOR			
CN6701	A	D	3A
DIODE			
D6701	A	D	5B
D6702	A	D	5A
D6703	A	D	2A
D6704	A	D	3B
IC			
IC6701	A	D	5B
COIL			
L6701	A	D	3D
L6702	A	D	2D
L6703	A	D	4A
L6704	A	D	3D
L6705	A	D	4D
TRANSISTOR			
Q6701	A	D	5B
Q6702	A	D	2D
Q6703	B	C	2D
Q6704	B	C	2A
Q6705	B	C	2B
RESISTOR			
R6701	B	C	4B
R6702	B	C	4B
R6703	B	C	5A
R6704	B	C	5A
R6705	B	C	2C
R6706	B	C	1C
R6707	B	C	1D
R6708	B	C	2D
R6709	B	C	1D
R6710	B	C	1D
R6711	B	C	3D
R6712	B	C	2A
R6713	B	C	2A
R6714	B	C	2B
R6715	B	C	2A
R6716	B	C	2B
R6717	B	C	3A
R6718	B	C	3B
R6719	B	C	2C
R6720	B	C	2C
OTHER			
LC6701	A	D	3B
LC6702	A	D	3A

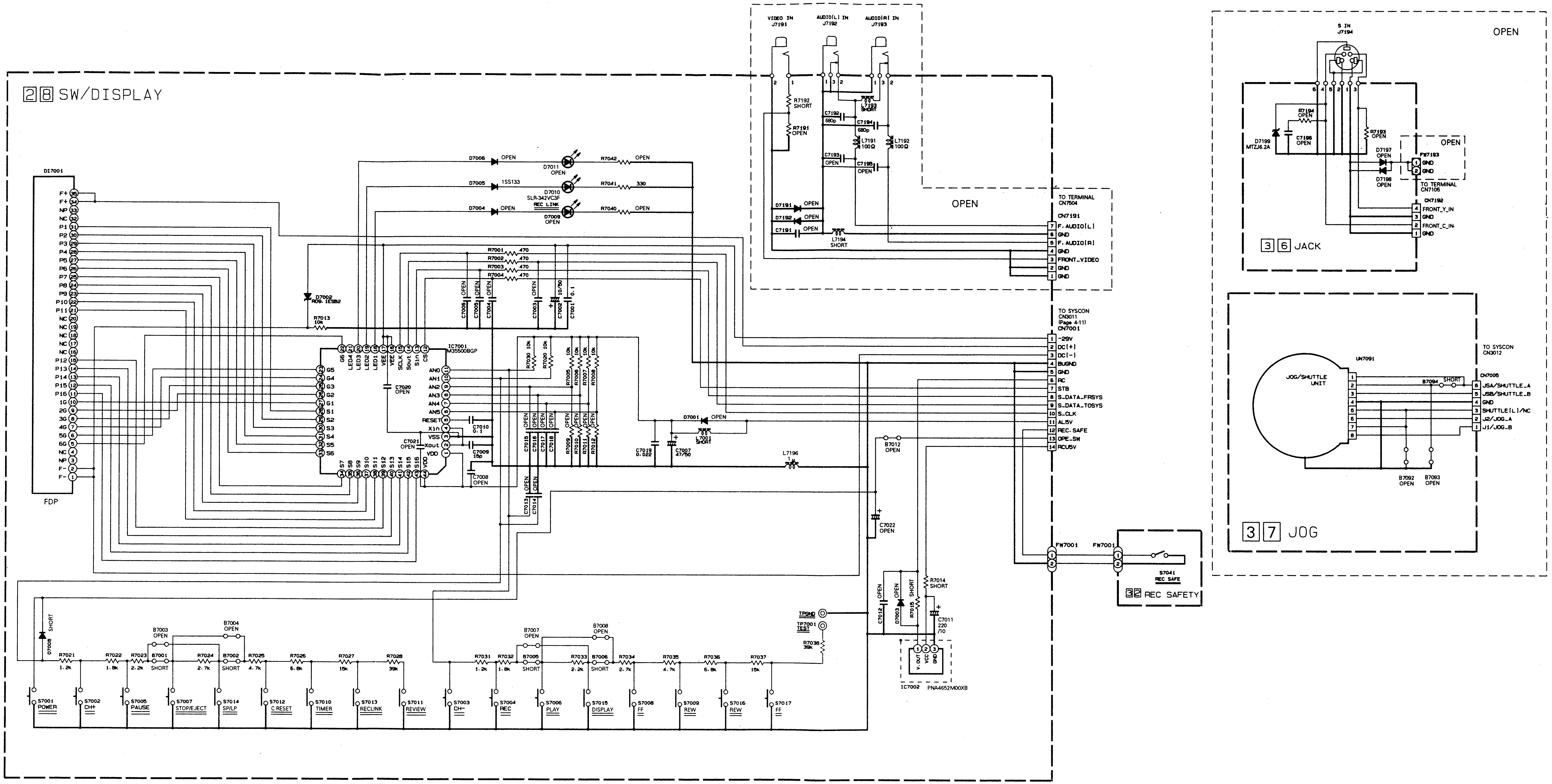
4.17 DEMODULATOR CIRCUIT BOARD


LPA10021
DEMOD PWB ASS'Y
LPB10021
DEMOD PWB
-001B
UL MARK
IC6701
CN6701
C6707
R6710
B6702
C6708
C6729
C6730
X6701
R6706
R6705
C6719
C6705
R6719
R6720
C6717
C6721
C6726
C6723
C6728
C6727
C6714
C6716
C6702
C6724
C6704
R6716
R6714
R6718
D6704
LC6701
L6703
R6701
R6702
D6701
Q6701
R6704
R6703
C6703
C6713
C6712
C6709
Q6704
R6715
R6717
C6710
C6711
LC6702
B6701
C6715
D6703
D6702
L6705
L6704
L6701
L6702
C6718
C6720
C6722
C6725
Q6702
Q6703
Q6705
A
B
C
D
1
2
3
4
5
6

COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

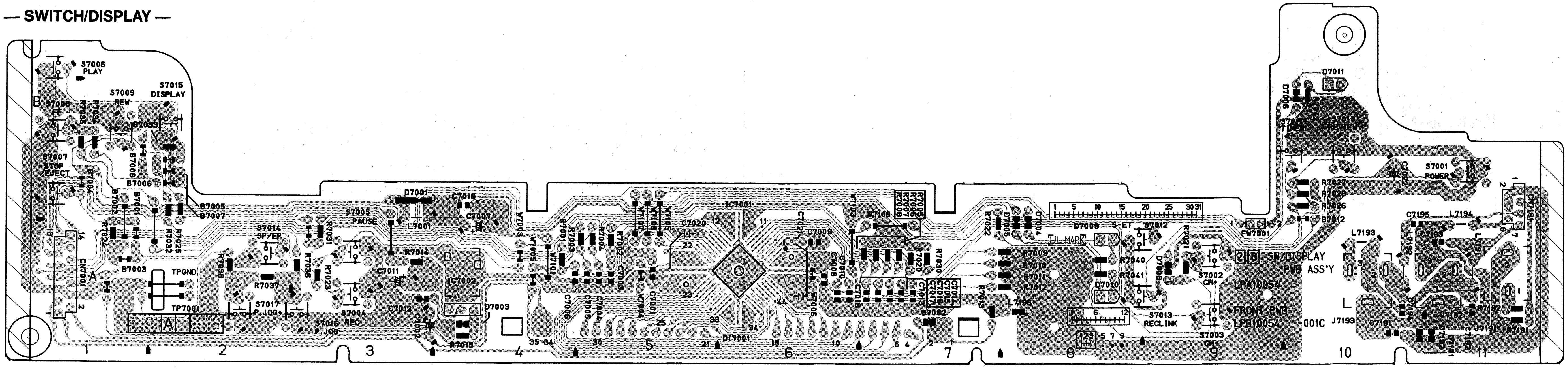
REF.NO.	LOCATION		
CAPACITOR			
C6701	B	C	4B
C6702	B	C	4B
C6703	A	D	5A
C6704	A	D	5C
C6705	B	C	1C
C6706	B	C	1D
C6707	B	C	1D
C6708	B	C	4D
C6709	A	D	1A
C6710	B	C	2A
C6711	B	C	3A
C6712	A	D	2B
C6713	A	D	1B
C6714	B	C	3C
C6715	A	D	4B
C6716	B	C	3B
C6717	B	C	3C
C6718	A	D	3D
C6719	A	D	2D
C6720	A	D	4C
C6721	B	C	3C
C6722	A	D	4D
C6723	B	C	4C
C6724	A	D	1B
C6725	A	D	4D
C6726	B	C	4C
C6727	B	C	4C
C6728	B	C	5C
C6729	B	C	5D
C6730	B	C	5D
CONNECTOR			
CN6701	A	D	3A
DIODE			
D6701	A	D	5B
D6702	A	D	5A
D6703	A	D	2A
D6704	A	D	3B
IC			
IC6701	A	D	5B
COIL			
L6701	A	D	3D
L6702	A	D	2D
L6703	A	D	4A
L6704	A	D	3D
L6705	A	D	4D
TRANSISTOR			
Q6701	A	D	5B
Q6702	A	D	2D
Q6703	B	C	2D
Q6704	B	C	2A
Q6705	B	C	2B
RESISTOR			
R6701	B	C	4B
R6702	B	C	4B
R6703	B	C	5A
R6704	B	C	5A
R6705	B	C	2C
R6706	B	C	1C
R6707	B	C	1D
R6708	B	C	2D
R6709	B	C	1D
R6710	B	C	1D
R6711	B	C	3D
R6712	B	C	2A
R6713	B	C	2A
R6714	B	C	2B
R6715	B	C	2A
R6716	B	C	2B
R6717	B	C	3A
R6718	B	C	3B
R6719	B	C	2C
R6720	B	C	2C
OTHER			
LC6701	A	D	3B
LC6702	A	D	3A

4.18 SWITCH/DISPLAY AND REC SAFETY SCHEMATIC DIAGRAMS


2 8 SW/DISPLAY
DI7001
FDP
F+ 35
F+ 34
NP 33
NC 32
P1 31
P2 30
P3 29
P4 28
P5 27
P6 26
P7 25
P8 24
P9 23
P10 22
P11 21
NC 20
NC 19
NC 18
NC 17
NC 16
P12 15
P13 14
P14 13
P15 12
P16 11
1G 10
2G 9
3G 8
4G 7
5G 6
6G 5
NC 4
NP 3
F- 2
F- 1
D7006 OPEN
D7011 OPEN
R7042 OPEN
D7005 1SS133
D7010 SLR-342VC3F
R7041 330
D7004 OPEN
REC LINK
D7009 OPEN
R7040 OPEN
D7002 RD9.1ESB2
R7013 10k
R7001 470
R7002 470
R7003 470
R7004 470
C7006 OPEN
C7005 OPEN
C7004 OPEN
C7003 OPEN
C7002 10/50
C7001 0.1
IC7001 M35500BGP
G6
LED4
LED3
LED2
LED1
VEE
VEE
SCLK
Sout
Sin
CS
G5
G4
G3
G2
G1
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
VDD
AN0
AN1
AN2
AN3
AN4
AN5
RESET
Xin
VSS
Xout
VDD
C7020 OPEN
C7021 OPEN
C7010 0.1
C7009 15p
C7008 OPEN
R7030 10k
R7020 10k
R7005 10k
R7006 10k
R7007 10k
R7008 10k
C7015 OPEN
C7016 OPEN
C7017 OPEN
C7018 OPEN
R7009 OPEN
R7010 OPEN
R7011 OPEN
R7012 OPEN
C7013 OPEN
C7014 OPEN
C7019 0.022
C7007 47/50
D7001 OPEN
L7001 SHORT
L7196 1µ
B7012 OPEN
C7022 OPEN
D7008 SHORT
B7003 OPEN
B7004 OPEN
R7021 1.2k
R7022 1.8k
R7023 2.2k
B7001 SHORT
R7024 2.7k
B7002 SHORT
R7025 4.7k
R7026 6.8k
R7027 15k
R7028 39k
S7001 POWER
S7002 CH+
S7005 PAUSE
S7007 STOP/EJECT
S7014 SP/LP
S7012 C.RESET
S7010 TIMER
S7013 RECLINK
S7011 REVIEW
B7007 OPEN
B7008 OPEN
R7031 1.2k
R7032 1.8k
B7005 SHORT
R7033 2.2k
B7006 SHORT
R7034 2.7k
R7035 4.7k
R7036 6.8k
R7037 15k
S7003 CH-
S7004 REC
S7006 PLAY
S7015 DISPLAY
S7008 FF
S7009 REW
S7016 REW
S7017 FF
TPGND
TP7001 TEST
R7038 39k
C7012 OPEN
D7003 OPEN
R7015 SHORT
R7014 SHORT
C7011 220 /10
IC7002 PNA4652M00XB
V.OUT
VCC
GND
VIDEO IN J7191
AUDIO[L] IN J7192
AUDIO[R] IN J7193
R7192 SHORT
R7191 OPEN
L7193 SHORT
C7192 680p
C7194 680p
L7191 100Ω
L7192 100Ω
C7193 OPEN
C7195 OPEN
D7191 OPEN
D7192 OPEN
C7191 OPEN
L7194 SHORT
OPEN
TO TERMINAL CN7504
CN7191
7 F.AUDIO[L]
6 GND
5 F.AUDIO[R]
4 GND
3 FRONT_VIDEO
2 GND
1 GND
TO SYSCON CN3011 (Page 4-11)
CN7001
1 -29V
2 DC[+]
3 DC[-]
4 BUGND
5 GND
6 RC
7 STB
8 S_DATA_FRSYS
9 S_DATA_TOSYS
10 S_CLK
11 AL5V
12 REC.SAFE
13 OPE_SW
14 RCU5V
FW7001
FW7001
S7041 REC SAFE
3 2 REC SAFETY
OPEN
S IN J7194
R7194 OPEN
C7196 OPEN
D7199 MTZJ6.2A
R7193 OPEN
D7197 OPEN
D7198 OPEN
OPEN
FW7193
1 GND
2 GND
TO TERMINAL CN7105
CN7192
4 FRONT_Y_IN
3 GND
2 FRONT_C_IN
1 GND
3 6 JACK
UN7091
JOG/SHUTTLE UNIT
B7094 SHORT
TO SYSCON CN3012
CN7005
6 JSA/SHUTTLE_A
5 JSB/SHUTTLE_B
4 GND
3 SHUTTLE[L]/NC
2 J2/JOG_A
1 J1/JOG_B
B7092 OPEN
B7093 OPEN
3 7 JOG

4.19 SWITCH/DISPLAY AND REC SAFETY CIRCUIT BOARDS

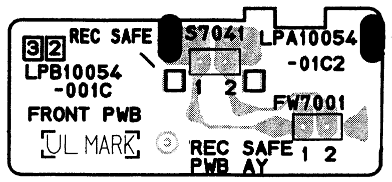
— SWITCH/DISPLAY —


S7006 PLAY
S7009 REW
S7015 DISPLAY
S7008 FF
S7007 STOP /EJECT
CN7001
TPGND
TP7001
S7014 SP/EP
S7005 PAUSE
S7017 P.JOG+
S7016 P.JOG-
S7004 REC
D7001
C7019
L7001
C7011
IC7002
C7012
D7003
R7015
IC7001
C7020
DI7001
D7002
D7009
S-ET
S7012
UL MARK
SW/DISPLAY PWB ASS'Y
LPA10054
FRONT PWB
LPB10054-001C
S7013 RECLINK
S7002 CH+
S7003 CH-
FW7001
D7011
S7011 TIMER
S7010 REVIEW
S7001 POWER
C7195
L7194
L7193
J7193
J7192
J7191
CN7191
1
2
3
4
5
6
7
8
9
10
11
A
B

COMPONENT PARTS LOCATION GUIDE <SW/DISPLAY>

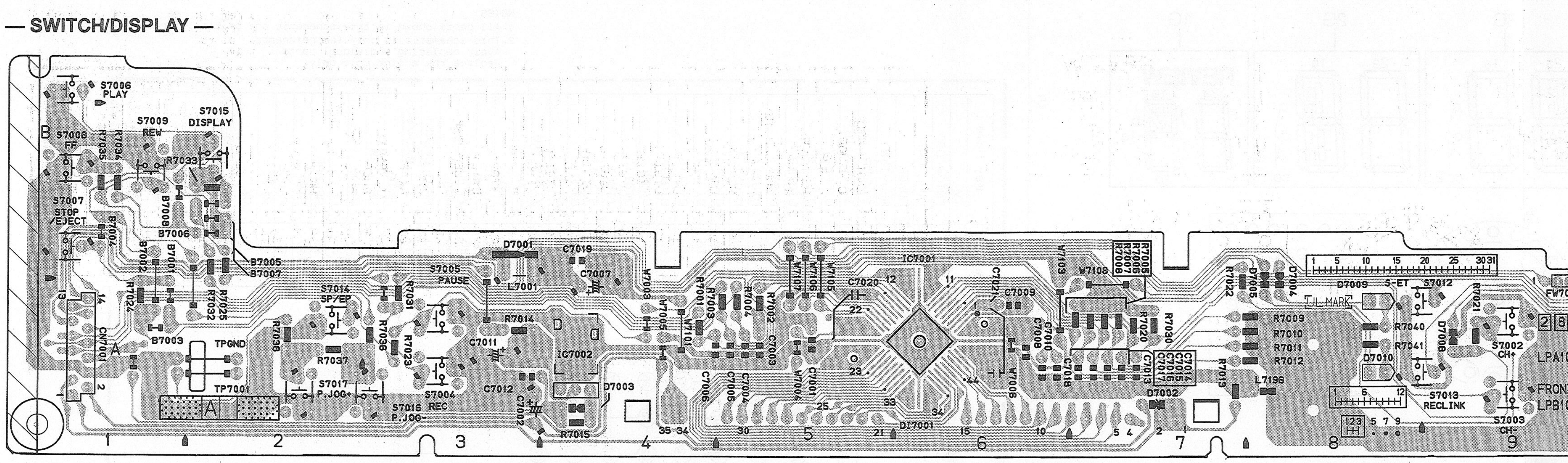
REF.NO.	LOCATION		
CAPACITOR			
C7001	A	D	5A
C7002	A	D	3A
C7003	A	D	5A
C7004	A	D	5A
C7005	A	D	5A
C7006	A	D	4A
C7007	A	D	4A
C7008	A	D	6A
C7009	A	D	6A
C7010	A	D	6A
C7011	A	D	3A
C7012	A	D	3A
C7013	A	D	7A
C7014	A	D	7A
C7015	A	D	7A
C7016	A	D	7A
C7017	A	D	7A
C7018	A	D	6A
C7019	A	D	4B
C7020	A	D	5A
C7021	A	D	6A
C7022	A	D	10B
C7191	A	D	10A
C7192	A	D	11A
C7193	A	D	11A
C7194	A	D	10A
C7195	A	D	11A
CONECTOR			
CN7001	A	D	1A
CN7191	A	D	11B
DIODE			
D7001	A	D	3B
D7002	A	D	7A
D7003	A	D	4A
D7004	A	D	8B
D7005	A	D	8B
D7006	A	D	10B
D7008	A	D	9A
D7009	A	D	8A
D7010	A	D	8A
D7011	A	D	10B
D7191	A	D	10A
D7192	A	D	11A
IC			
IC7001	B	C	6A
IC7002	A	D	4A
JACK			
J7191	A	D	11A
J7192	A	D	11A
J7193	A	D	10A
COIL			
L7001	A	D	9C
L7191	A	D	11A
L7192	A	D	10A
L7193	A	D	10A
L7194	A	D	11A
L7196	A	D	8A
RESISTOR			
R7001	A	D	4A
R7002	A	D	5A
R7003	A	D	5A
R7004	A	D	5A
R7005	A	D	7A
R7006	A	D	7A
R7007	A	D	7A
R7008	A	D	7A
R7009	A	D	7A
R7010	A	D	7A
R7011	A	D	7A
R7012	A	D	7A
R7013	A	D	7A
R7014	A	D	3A
R7015	A	D	4A
R7020	A	D	7A
R7021	A	D	9A
R7022	A	D	7A
R7023	A	D	3A
R7024	A	D	1A
R7025	A	D	2A
R7026	A	D	10B
R7027	A	D	10B
R7028	A	D	10B
R7030	A	D	7A
R7031	A	D	3B
R7032	A	D	2A
R7033	A	D	2B
R7034	A	D	1B
R7035	A	D	1B
R7036	A	D	3A
R7037	A	D	2A
R7038	A	D	2A
R7040	A	D	8A
R7041	A	D	8A
R7042	A	D	10B
R7191	A	D	11A
R7192	A	D	11A
SWITCH			
S7001	A	D	11B
S7002	A	D	9A
S7003	A	D	9A
S7004	A	D	3A
S7005	A	D	3A
S7006	A	D	1C
S7007	A	D	1B
S7008	A	D	1B
S7009	A	D	1B
S7010	A	D	10B
S7011	A	D	10B
S7012	A	D	8A
S7013	A	D	8A
S7014	A	D	2A
S7015	A	D	2B
S7016	A	D	3A
S7017	A	D	2A
OTHER			
DI7001	A	D	6A
FW7001	A	D	9B
TP7001	A	D	1A
TPGND	A	D	1A

— REC SAFETY —


REC SAFE
S7041
LPA10054
-01C2
LPB10054
-001C
FRONT PWB
FW7001
UL MARK
REC SAFE
PWB AY
1 2
1 2
3
2

4.19 SWITCH/DISPLAY AND REC SAFETY CIRCUIT BOARDS

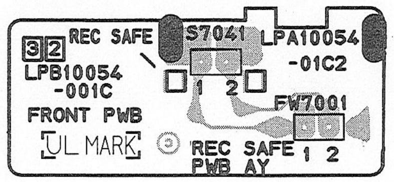
— SWITCH/DISPLAY —


S7006
PLAY
S7009
REW
S7015
DISPLAY
B
S7008
FF
R7035
R7034
R7033
S7007
STOP
/EJECT
B7008
B7006
B7005
B7007
B7003
R7025
R7032
R7024
R7036
R7037
CN7001
A
TPGND
TP7001
S7014
SP/EP
S7005
PAUSE
R7031
R7023
S7017
P.JOG+
S7016
REC
P.JOG-
S7004
D7001
C7019
C7007
L7001
R7014
C7011
IC7002
C7012
C7002
D7003
R7015
IC7001
C7020
DI7001
W7108
C7009
D7002
R7030
R7020
R7022
R7019
D7009
S-ET
S7012
UL MARK
R7009
R7010
R7011
R7012
R7040
R7041
D7010
L7196
S7013
RECLINK
S7002
CH+
S7003
CH-
FW7001
2 8
SW/DISPLAY
PWB ASS'Y
LPA10054
FRONT PWB
LPB10054 -001C
D7011
D7006
R7042
S7011
TIMER
S7010
REVIEW
C7022
S7001
POWER
R7027
R7028
R7026
R7021
L7194
L7193
L7192
L7191
C7195
C7193
CN7191
J7193
C7191
C7194
J7192
R7192
J7191
R7191
D7192
C7192
1
2
3
4
5
6
7
8
9
10
11

COMPONENT PARTS LOCATION GUIDE <SW/DISPLAY>

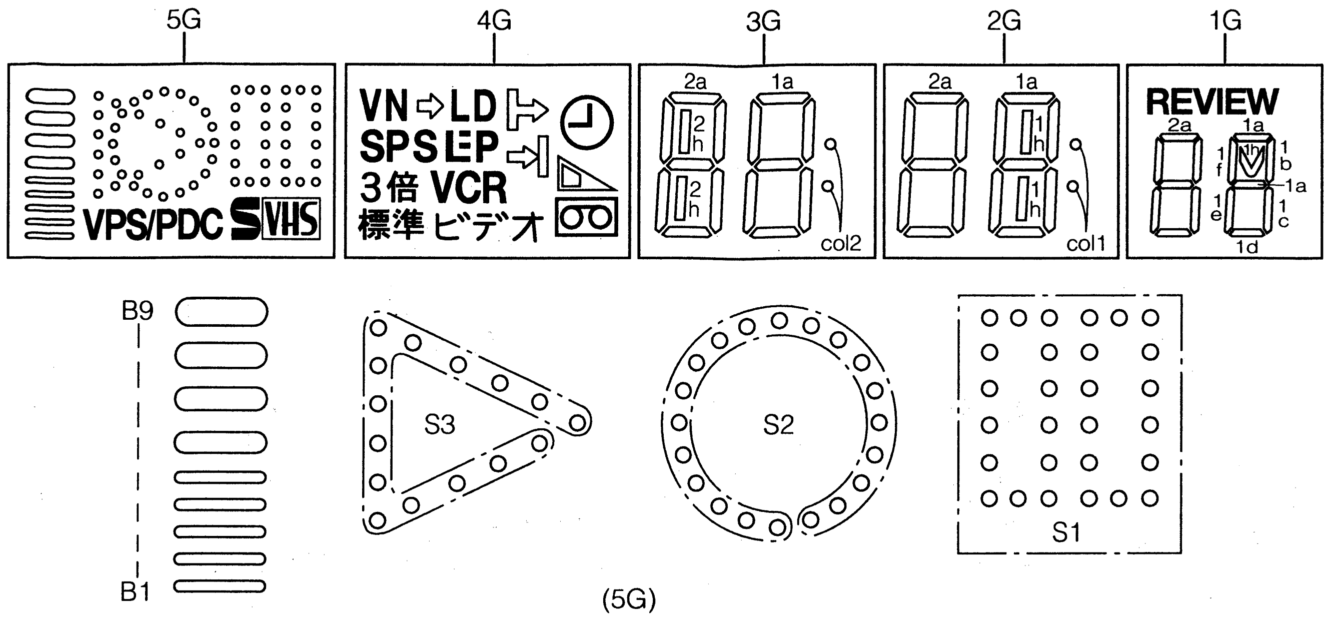
REF.NO.	LOCATION		
CAPACITOR			
C7001	A	D	5A
C7002	A	D	3A
C7003	A	D	5A
C7004	A	D	5A
C7005	A	D	5A
C7006	A	D	4A
C7007	A	D	4A
C7008	A	D	6A
C7009	A	D	6A
C7010	A	D	6A
C7011	A	D	3A
C7012	A	D	3A
C7013	A	D	7A
C7014	A	D	7A
C7015	A	D	7A
C7016	A	D	7A
C7017	A	D	7A
C7018	A	D	6A
C7019	A	D	4B
C7020	A	D	5A
C7021	A	D	6A
C7022	A	D	10B
C7191	A	D	10A
C7192	A	D	11A
C7193	A	D	11A
C7194	A	D	10A
C7195	A	D	11A
CONECTOR			
CN7001	A	D	1A
CN7191	A	D	11B
DIODE			
D7001	A	D	3B
D7002	A	D	7A
D7003	A	D	4A
D7004	A	D	8B
D7005	A	D	8B
D7006	A	D	10B
D7008	A	D	9A
D7009	A	D	8A
D7010	A	D	8A
D7011	A	D	10B
D7191	A	D	10A
D7192	A	D	11A
IC			
IC7001	B	C	6A
IC7002	A	D	4A
JACK			
J7191	A	D	11A
J7192	A	D	11A
J7193	A	D	10A
COIL			
L7001	A	D	9C
L7191	A	D	11A
L7192	A	D	10A
L7193	A	D	10A
L7194	A	D	11A
L7196	A	D	8A
RESISTOR			
R7001	A	D	4A
R7002	A	D	5A
R7003	A	D	5A
R7004	A	D	5A
R7005	A	D	7A
R7006	A	D	7A
R7007	A	D	7A
R7008	A	D	7A
R7009	A	D	7A
R7010	A	D	7A
R7011	A	D	7A
R7012	A	D	7A
R7013	A	D	7A
R7014	A	D	3A
R7015	A	D	4A
R7020	A	D	7A
R7021	A	D	9A
R7022	A	D	7A
R7023	A	D	3A
R7024	A	D	1A
R7025	A	D	2A
R7026	A	D	10B
R7027	A	D	10B
R7028	A	D	10B
R7030	A	D	7A
R7031	A	D	3B
R7032	A	D	2A
R7033	A	D	2B
R7034	A	D	1B
R7035	A	D	1B
R7036	A	D	3A
R7037	A	D	2A
R7038	A	D	2A
R7040	A	D	8A
R7041	A	D	8A
R7042	A	D	10B
R7191	A	D	11A
R7192	A	D	11A
SWITCH			
S7001	A	D	11B
S7002	A	D	9A
S7003	A	D	9A
S7004	A	D	3A
S7005	A	D	3A
S7006	A	D	1C
S7007	A	D	1B
S7008	A	D	1B
S7009	A	D	1B
S7010	A	D	10B
S7011	A	D	10B
S7012	A	D	8A
S7013	A	D	8A
S7014	A	D	2A
S7015	A	D	2B
S7016	A	D	3A
S7017	A	D	2A
OTHER			
DI7001	A	D	6A
FW7001	A	D	9B
TP7001	A	D	1A
TPGND	A	D	1A

— REC SAFETY —


3 2
REC SAFE
S7041
LPA10054
-01C2
LPB10054
-001C
FRONT PWB
1
2
FW7001
UL MARK
REC SAFE
PWB AY
1 2

4.20 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT


5G
4G
3G
2G
1G
VN⇨LD
SPSLEP
3倍 VCR
標準ビデオ
VPS/PDC
SVHS
2a
1a
2h
col2
1h
col1
REVIEW
1f
1b
1e
1c
1d
B9
B1
S3
S2
S1
(5G)

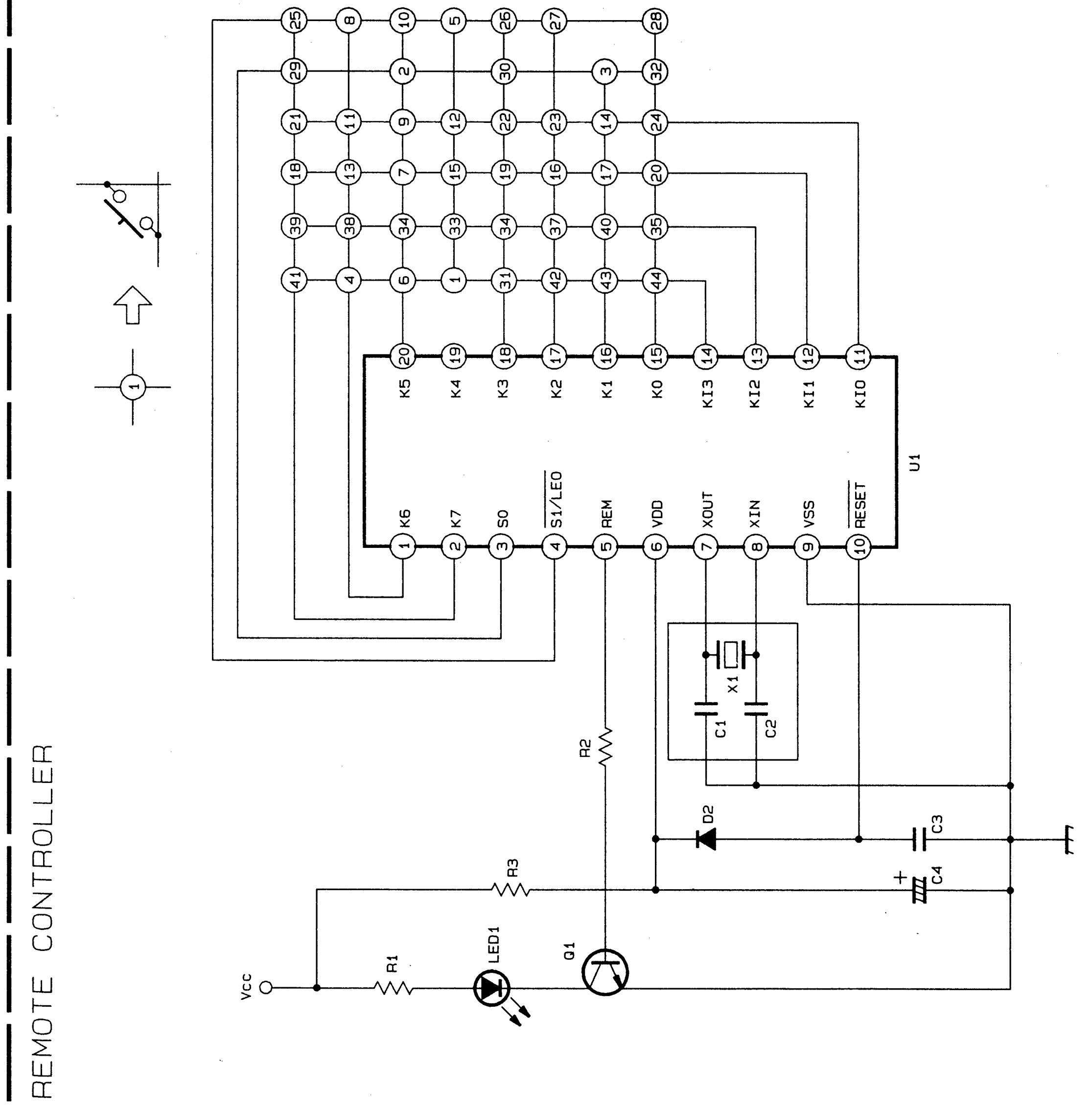
ANODE CONNECTION

	5G	4G	3G	2G	1G
P 1	S2	|⇨	1a	1a	1a
P 2	S1	⇨|	1b	1b	1b
P 3	S3	3倍	1f	1f	1f
P 4	VPS/PDC	標準	1g	1g	1g
P 5	SVHS	◷	1c	1c	1c
P 6	—	◺	1e	1e	1e
P 7	—	📼	1d	1d	1d
P 8	B9	VCR	col2	1h	1h
P 9	B8	ビデオ	2a	2a	2a
P10	B7	⇨	2b	2b	2b
P11	B6	VN	2f	2f	2f
P12	B5	LD	2g	2g	2g
P13	B4	SP	2c	2c	2c
P14	B3	S (SEP)	2e	2e	2e
P15	B2	: (SEP)	2d	2d	2d
P16	B1	LP (SEP)	2h	col1	REVIEW

4.21 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

Key No.	Key Name
1	TV
2	ENTER/OSD
3	C.MEMORY
4	POWER
5	RE-VIEW
6	TV/VCR
7	AUDIO/MUTE
8	DISPLAY
9	DIGIT1
10	DIGIT2
11	DIGIT3
12	DIGIT4
13	DIGIT5
14	DIGIT6
15	DIGIT7
16	DIGIT8
17	DIGIT9
18	CANCEL
19	DIGIT0
20	TIMER
21	START+
22	STOP+
23	DATE+
24	VIDEO CH+
25	START-
26	END-
27	DATE-
28	VIDEO CH-
29	PROG
30	PROG CHECK
31	-/-- MAIN/SUB
32	SKIP
33	RE-VIEW
34	PLAY
35	FF
36	RECORD
37	STOP
38	PAUSE
39	MENU
40	OK
41	<</VOLUME-
42	Δ/TV CH+
43	>>/VOLUME+
44	∇/TV CH-
36+34	REC START
36+38	REC PAUSE


U1
K5
K4
K3
K2
K1
K0
KI3
KI2
KI1
KI0
K6
K7
S0
S1/LEO
REM
VDD
XOUT
XIN
VSS
RESET
X1
C1
C2
C3
C4
R1
R2
R3
D2
LED1
Q1
Vcc
REMOTE CONTROLLER
5
4
3
2
1
A
B
C
D

4.22 VOLTAGE CHARTS

<VIDEO/N.AUDIO>

MODE PIN NO.	REC	PLAY
IC1		
1	2.5	2.5
2	2.5	2.5
3	0	0
4	2.7	2.5
5	0	0
6	2.8	2.8
7	2.5	2.5
8	2.5	2.5
9	2.5	2.5
10	2.5	2.5
11	2.5	2.5
12	5.0	5.0
13	1.9	1.4
14	1.9	1.4
15	2.6	3.0
16	1.5	0.7
17	0.9	0.9
18	2.3	2.3
19	3.1	3.1
20	2.7	2.7
21	2.3	2.3
22	1.9	1.9
23	3.0	3.0
24	2.2	2.2
25	1.4	1.4
26	2.1	2.1
27	0	0
28	4.9	4.9
29	1.6	1.9
30	3.0	3.0
31	2.8	2.8
32	0	0
33	0	0
34	0	0
35	3.0	3.0
36	5.0	5.0
37	0	0
38	5.0	5.0
39	3.3	3.3
40	5.0	5.0
41	5.0	5.0
42	2.0	2.0
43	5.0	5.0
44	2.5	2.5
45	0	0
46	2.0	2.0
47	0	0
48	0	0
49	0	0
50	0.4	0.4
51	0	0
52	1.3	2.4
53	3.0	2.8
54	1.9	1.9
55	2.1	2.1
56	2.8	2.8
57	0	0
58	3.0	3.0
59	3.3	3.3
60	2.1	2.1
61	4.9	4.9
62	4.9	4.9
63	4.9	4.9
64	0	0
65	1.1	2.4
66	4.9	4.9
67	4.9	4.9
68	0	0
69	2.8	2.8
70	2.7	2.7
71	-	-
72	2.3	2.1
73	-	-
74	2.7	1.1
75	-	-
76	2.3	2.3
77	4.5	4.5
78	2.7	2.7
79	4.6	2.1
80	0	0
81	-	-
82	1.2	1.2
83	2.3	2.3
84	0	1.3
85	0	0
86	2.3	2.3
87	2.2	2.2
88	2.3	2.3
89	2.3	2.3
90	4.9	4.9
91	0	0
92	0	0
93	0	0
94	0	0
95	0.5	0.5
96	5.0	5.0
97	0.3	0
98	5.0	5.0
99	0.5	2.5
100	2.5	2.5
IC2		
1	2.7	2.7
2	0	0
3	2.7	2.7
4	4.9	0
5	2.7	2.7
6	5.0	5.0
7	2.0	2.0
8	0	0
Q1		
E	3.4	3.4
C	0	0
B	2.7	2.7
Q6		
E	2.7	2.7
C	0	0
B	2.1	2.1
Q13		
E	1.1	1.1
C	3.9	3.9
B	1.7	1.7
Q14		
E	3.2	3.2
C	4.9	4.9
B	3.9	3.9
Q15		
E	3.8	3.8
C	0	0
B	3.2	3.2
Q16		
E	4.9	4.9
C	4.9	0
B	0.2	5.0
Q17		
E	0	0
C	0	0
B	3.0	3.0
Q18		
E	0	0
C	0	0
B	3.0	3.0
Q34		
E	2.2	2.2
C	2.3	2.3
B	0	0
Q35		
E	2.3	2.3
C	2.2	2.2
B	0	0
Q36		
E	0	0
C	0	0
B	0.7	0.7
Q37		
E	0	0
C	0	0
B	0.7	0.7
Q47		
E	4.9	4.9
C	2.3	2.3
B	2.8	2.8
Q48		
E	1.9	1.9
C	0	0
B	1.0	1.0
Q49		
E	2.1	2.1
C	4.9	4.9
B	2.8	2.8
Q55		
E	0	0
C	0	0
B	3.0	3.0
Q101		
E	0	0
C	0	0
B	5.0	5.0
Q152		
E	5.0	2.7
C	0	0
B	4.5	2.1
Q153		
E	2.1	2.1
C	4.9	4.9
B	2.7	2.7
Q2001		
E	-14.3	0
C	0	0
B	-19.7	0.7
Q2002		
E	-14.2	0
C	0	0
B	-19.3	0.7
Q2003		
E	5.0	5.0
C	-19.5	4.9
B	5.0	0
Q2051		
E	0	0
C	8.1	0.2
B	0.4	0.2
Q2052		
E	11.5	11.5
C	11.3	1.1
B	10.7	11.5
Q2053		
E	0	0
C	0	11.4
B	4.5	0
Q2054		
E	11.3	1.1
C	11.2	0
B	10.5	1.1
Q2055		
E	0	0
C	0	1.1
B	5.0	0
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.3	2.3
6	2.3	2.3
7	2.2	2.2
8	2.2	2.2
9	2.5	0
10	2.5	0
11	2.5	0
CN101		
11	0	0
12	0	0
13	4.9	4.9
14	4.9	4.9
15	0	5.1
16	0	0
17	0.3	0.3
18	0	0
19	3.4	3.4
20	0	0
21	0	0
22	2.1	2.1
23	0	0
24	0.3	0.3
25	0	0
26	0.3	0.3
27	0	0
28	0	0
29	0	0
30	0	0
CN102		
1	1.3	1.1
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	1.3	1.1
8	1.9	1.9
9	1.3	2.4
10	5.0	5.0
11	2.3	2.3
12	3.0	3.0
13	0	0
14	0	0
15	2.3	2.3
16	0	0
17	5.0	5.0
18	4.9	4.9
19	4.9	4.9
20	4.9	4.9
21	2.4	2.4
22	0	0
23	2.3	2.3
24	0	0
25	0	0
26	2.5	2.5
27	1.9	1.7
28	0.7	0.7
29	0	0
30	0.5	0.5
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	2.2	2.5
7	2.5	2.5
CN2002		
1	0	0
2	0	0

<ON SCREEN>

MODE PIN NO.	REC	PLAY
IC201		
1	0	0
2	2.7	2.7
3	5.0	5.0
4	0	0
5	4.7	4.7
6	2.5	2.5
7	2.5	2.5
8	5.0	5.0
9	3.0	3.0
10	4.5	4.5
11	1.2	1.2
12	5.0	5.0
13	2.9	2.9
14	2.9	2.9
15	0	0
16	1.2	1.2
17	0	0
18	5.0	5.0
19	2.3	2.3
20	0	0
21	2.3	2.3
22	0.5	0.5
23	5.0	5.0
24	2.9	2.9
25	2.5	2.5
26	5.0	5.0
27	4.7	4.7
28	3.7	3.7
29	5.0	5.0
30	5.0	5.0
Q207		
E	3.0	3.0
C	0	0
B	2.3	2.3
Q208		
E	2.3	2.3
C	5.0	5.0
B	3.0	3.0

<FMA>

MODE PIN NO.	REC	PLAY
IC2201		
1	2.4	2.4
2	0	0
3	2.4	2.4
4	0	0
5	0	0
6	2.5	2.5
7	2.0	2.0
8	0	0
9	0	0
10	0	0
11	0	0
12	2.0	2.0
13	0	0
14	0	0
15	0	0
16	2.5	2.5
17	0.6	0.6
18	2.5	2.5
19	2.5	2.5
20	2.5	0.5
21	2.5	0
22	2.6	0.6
23	0	0
24	2.5	0.7
25	4.9	4.9
26	2.6	0
27	0	-
28	4.2	2.1
29	4.4	1.8
30	4.4	1.7
31	1.0	1.9
32	2.5	2.5
33	2.5	2.5
34	0.7	0.7
35	2.5	2.5
36	0	0.2
37	1.7	1.7
38	0	0
39	0	0
40	5.0	5.0
41	0	0
42	5.0	5.0
43	4.9	4.9
44	3.2	3.2
45	0	0
46	4.8	4.8
47	2.5	2.5
48	2.5	2.5
49	0.2	0.2
50	1.0	1.0
51	0	0
52	0	0
53	4.4	4.4
54	0	0
55	0	0
56	0	0
57	4.4	4.4
58	10.0	10.0
59	4.5	4.5
60	0.8	0.8
61	2.5	2.5
62	2.4	2.4
63	4.4	4.4
64	4.5	4.5
Q2151		
E	4.9	4.9
C	5.0	5.0
B	2.1	2.1
Q2152		
E	5.0	5.0
C	4.9	4.9
B	0	0.2
Q2201		
E	0	0
C	0	0.
B	-0.3	-0.2
Q2202		
E	0	0
C	0	0
B	0	-0.2
Q2203		
E	5.2	5.2
C	-0.6	-0.1
B	5.1	5.1
Q2204		
E	0	0
C	5.1	5.1
B	0	0.2
Q2253		
E	0	0
C	0	0
B	4.6	4.6
Q2255		
E	0	0
C	0	0
B	4.2	4.2
Q2256		
E	0	0
C	4.2	4.2
B	0	0
Q2258		
E	4.5	0
C	4.4	1.7
B	0.2	5.0

<SYSTEM CONTROL>

MODE PIN NO.	REC	PLAY
IC3001		
1	2.8	2.5
2	0	0
3	1.9	2.5
4	2.5	2.5
5	2.5	2.5
6	2.6	2.6
7	2.5	2.5
8	2.5	2.5
9	5.1	5.1
10	5.1	5.1
11	0	0
12	0	1.3
13	0	1.3
14	4.6	4.6
15	4.9	4.9
16	0.9	0.9
17	1.0	0
18	0	0
19	0.2	0.2
20	0.2	0.2
21	4.1	4.1
22	4.2	2.0
23	0	0
24	5.0	5.0
25	0	0
26	5.1	5.1
27	5.1	5.1
28	5.1	5.1
29	5.1	5.1
30	5.1	5.1
31	5.1	5.1
32	0	0
33	0	0
34	0	5.1
35	0	0
36	0	0
37	5.0	5.0
38	0.9	-
39	4.5	4.5
40	0	0
41	5.1	5.1
42	4.6	4.6
43	0	0
44	0	0
45	5.1	5.1
46	5.1	0
47	0	0
48	5.1	0
49	4.9	4.9
50	4.9	4.9
51	5.1	5.1
52	-	1.0
53	4.5	4.5
54	-	-
55	-	-
56	0	0
57	0	0
58	5.0	5.0
59	3.0	3.0
60	0	0
61	0	0
62	0	0
63	0	0
64	-	-
65	-	-
66	5.1	5.1
67	-	-
68	0	0
69	-	-
70	5.1	5.1
71	5.1	5.1
72	5.0	5.0
73	5.1	5.1
74	0	0
75	4.7	4.7
76	4.7	4.7
77	3.1	3.1
78	5.1	0
79	0	5.1
80	0	0
81	0	0
82	5.1	5.1
83	0	0
84	0	0
85	0	0
86	4.7	4.7
87	5.1	5.1
88	4.8	0
89	0	0
90	0	0
91	3.0	3.0
92	5.0	5.0
93	5.1	5.1
94	5.1	5.1
95	5.1	5.1
96	0	0
97	5.1	5.1
98	0.2	0.2
99	0	-
100	-	-
101	2.5	2.5
102	1.2	1.2
103	0	0
104	0	0
105	5.1	5.1
106	5.0	5.0
107	0	0
108	1.6	1.6
109	5.1	5.1
110	0	0
111	0	0
112	2.5	2.5
IC3002		
1	5.1	5.1
2	5.0	5.0
3	0	0
IC3003		
1	0	0
2	0	0
3	0	0
4	0	0
5	4.7	4.7
6	4.7	4.7
7	0	0
8	5.1	5.1
IC3004		
1	0	0
2	12.2	12.2
3	-	1.0
4	0	0.3
5	0	0
6	12.2	12.2
7	0.3	1.0
8	12.2	12.2
9	0	0
Q3001		
E	0	0
C	12.2	12.2
B	0	0
Q3002		
E	0	0
C	3.9	4.5
Q3003		
E	0	0
C	4.4	4.6
Q3004		
E	0	0
C	0	0
B	0.7	0.7
Q3005		
E	5.1	5.1
C	5.8	5.8
B	5.7	5.7
Q3008		
E	0	0
C	4.9	4.9
B	0	0
Q4001		
E	0	0
C	0	0
B	5.0	5.0
CN3001		
1	11.5	11.5
2	0	0
3	1.3	1.3
4	0	0
5	1.6	1.6
CN3002		
1	1.8	0.9
2	1.7	0.9
CN3003		
1	0	0
2	2.5	2.5
3	2.5	2.5
4	5.0	5.0
5	0	0
6	5.1	5.1
7	0.3	0.3
8	12.2	12.2
CN3004		
1	5.1	5.1
2	5.1	5.1
3	0	0
4	0	0
CN3011		
1	5.1	5.1
2	0	0
3	5.1	5.1
4	5.1	5.1
5	4.5	4.5
6	5.1	5.1
7	-	1.1
8	4.5	4.5
9	5.1	5.1
10	0	0
11	0	0
12	-19.9	-19.9
13	-16.1	-16.1
14	-28.7	-28.7

<SW. REG>

MODE PIN NO.	REC	PLAY
IC5301		
1	5.8	5.8
2	5.0	5.0
3	4.9	4.9
4	0	0
5	12.2	12.2
6	11.5	11.5
7	12.2	12.2
8	1.2	1.2
9	1.2	1.2
10	10.8	10.8
Q5101		
S	0	0
D	160.7	157.0
G	-	-
Q5102		
E	0	0
C	-	-
B	-	-
Q5303		
E	5.2	5.2
C	5.8	5.8
B	5.8	5.8
Q5304		
E	11.5	11.5
C	12.3	12.3
B	12.2	12.2
Q5305		
E	12.2	12.2
C	12.2	12.2
B	0.6	0.6
Q5306		
E	12.2	12.2
C	11.5	11.5
B	10.9	10.9
Q5310		
E	0	0
C	0	0
B	4.6	4.6
Q5311		
E	32.1	32.1
C	32.1	32.1
B	31.5	31.5
Q5312		
E	-15.4	-15.4
C	-15.6	-15.6
B	-16.1	-16.1

<TUNER>

MODE PIN NO.	REC	PLAY
IC6080		
1	1.2	1.2
2	1.7	1.7
3	2.9	2.9
4	0	0
5	4.1	4.1
6	4.1	4.1
7	4.1	4.1
8	11.5	11.5
Q6030		
E	0.7	0.7
C	0	0
B	0	0
Q6031		
E	0	0
C	0	0
B	5.0	5.0
Q6032		
E	0	0
C	0	0
B	4.3	4.3
CN6701		
1	-	-
2	4.8	4.8
3	4.6	4.6
4	0	0
5	4.9	4.9
6	11.5	11.5
7	0	0
8	0	0
9	0	0
10	2.4	2.4
11	0	0
12	4.4	4.4

<TERMINAL(MAIN)>

MODE PIN NO.	REC	PLAY
CN7501		
1	0.2	5.0
2	0	0
3	0	0
4	2.3	2.3
5	0	0
6	1.2	1.2
7	11.5	11.5
8	0.7	0.7
9	11.5	11.5
CN7502		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	4.8	4.8
8	4.7	4.7
9	5.1	5.1
10	5.1	5.1
CN7503		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0

<2D SVHS (VIDEO)>

MODE PIN NO.	REC	PLAY
IC1001		
1	3.0	3.0
2	0.2	4.9
3	2.2	2.2
4	1.8	1.8
5	2.9	2.9
6	2.8	2.8
7	2.3	2.3
8	3.0	3.0
9	2.3	2.3
10	2.8	2.8
11	2.8	2.8
12	2.2	2.2
13	4.9	4.9
14	4.9	4.9
15	2.5	2.5
16	2.8	2.8
17	0	0
18	2.9	2.1
19	0.3	0.3
20	0	0
21	2.3	2.3
22	2.8	2.8
23	2.3	2.3
24	0	0
25	3.4	3.4
26	2.1	2.1
27	2.8	2.8
28	2.8	2.8
29	2.8	2.8
30	0	0
31	2.8	2.8
32	0	0
33	2.8	2.8
34	4.9	4.9
35	2.8	2.8
36	1.9	1.9
37	3.1	3.1
38	2.9	2.9
39	2.4	2.4
40	2.7	2.7
41	2.9	2.9
42	2.8	2.8
43	3.1	3.1
44	2.2	2.2
45	0	0
46	2.8	2.8
47	1.7	1.1
48	2.8	2.8
49	4.9	4.9
50	2.8	2.8
51	4.9	4.9
52	2.8	2.8
53	1.9	1.9
54	2.6	3.6
55	0	0
56	2.3	2.3
IC1002		
1	1.9	1.9
2	0.2	4.9
3	3.3	3.3
4	3.3	3.3
5	4.9	4.9
6	2.1	2.1
7	2.0	2.0
8	4.9	4.9
9	1.4	1.4
10	2.9	2.9
11	2.8	2.8
12	2.8	2.8
13	0	0
14	2.8	2.8
15	2.8	2.8
16	1.9	1.9
17	1.9	1.9
18	1.9	1.9
IC1006		
1	0	0
2	0	4.9
3	0	0
4	2.7	2.7
5	0	0
6	4.0	4.0
7	0	0
8	0	0.2
9	4.0	4.0
10	4.9	4.9
11	2.7	2.7
12	1.5	1.5
13	0.8	0.8
14	3.3	3.3
15	3.4	3.2
16	1.3	1.3
17	4.0	4.0
18	1.1	1.1
19	4.8	4.8
20	0.7	0.7
IC1007		
1	3.7	3.7
2	2.0	2.0
3	2.2	2.2
4	0	0
5	2.4	2.4
6	2.4	2.4
7	1.1	1.1
8	4.9	4.9
Q1005		
E	0	0
C	0	0
B	2.6	2.6
Q1006		
E	4.1	4.1
C	0	0
B	3.5	3.5
Q1007		
E	1.4	1.4
C	3.5	3.5
B	2.1	2.1
Q1012		
E	2.5	2.5
C	4.9	4.9
B	3.2	3.2
Q1014		
E	0	0
C	1.2	1.2
B	0.6	0.6
Q1015		
E	0.6	0.6
C	3.2	3.2
B	1.3	1.3
Q1016		
E	0	0
C	0	0
B	5.0	5.0
CN1001		
1	0	0
2	0	0
3	4.9	4.9
4	4.9	4.9
5	0	5.1
6	0	0
7	0.3	0.3
8	0	0
9	3.4	3.4
10	0	0
11	0	0
12	2.1	2.1
13	0	0
14	0.3	0.3
15	0	0
16	0.3	0.3
17	0	0
18	0	0
19	0	0
20	0	0
CN1002		
1	1.3	1.1
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	1.3	1.1
8	1.9	1.9
9	1.3	2.4
10	5.0	5.0
11	2.3	2.3
12	3.0	3.0
13	0	0
14	0	0
15	2.3	2.3
16	0	0
17	5.0	5.0
18	4.9	4.9
19	4.9	4.9
20	4.9	4.9
21	2.4	2.4
22	0	0
23	2.3	2.3
24	0	0
25	0	0
26	2.5	2.5
27	1.9	1.7
28	0.7	0.7
29	0	0
30	0.5	0.5
CN1003		
1	2.1	2.1
2	0	0
3	2.3	2.3
4	0	0
5	5.7	5.7
6	0	0
7	5.6	5.6

<2D SVHS (2D Y/C)>

MODE PIN NO.	REC	PLAY
IC1201		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
Q1201		
E	-	-
C	-	-
B	-	-
Q1202		
E	-	-
C	-	-
B	-	-
Q1203		
E	-	-
C	-	-
B	-	-
Q1205		
E	-	-
C	-	-
B	-	-
Q1206		
E	-	-
C	-	-
B	-	-
Q1207		
E	-	-
C	-	-
B	-	-
Q1208		
E	-	-
C	-	-
B	-	-
Q1209		
E	-	-
C	-	-
B	-	-
Q1210		
E	-	-
C	-	-
B	-	-
Q1211		
E	-	-
C	-	-
B	-	-
Q1212		
E	-	-
C	-	-
B	-	-
Q1213		
E	-	-
C	-	-
B	-	-
Q1215		
E	-	-
C	-	-
B	-	-
Q1216		
E	-	-
C	-	-
B	-	-
Q1217		
E	-	-
C	-	-
B	-	-
Q1218		
E	-	-
C	-	-
B	-	-
Q1219		
E	-	-
C	-	-
B	-	-
Q1221		
E	-	-
C	-	-
B	-	-

<TERMINAL>

MODE PIN NO.	REC	PLAY
IC7101		
1	1.6	1.6
2	0	0
3	1.6	1.6
4	11.5	11.5
5	2.0	2.0
6	0	0
7	5.1	5.1
8	11.5	11.5
9	5.1	5.1
10	5.2	5.2
11	5.1	5.1
12	0	0
13	4.8	4.8
14	4.8	4.8
15	5.8	5.8
16	5.1	5.1
17	5.8	5.8
18	5.1	5.1
19	11.5	11.5
20	2.5	2.5
21	1.4	1.1
22	1.4	1.1
23	2.5	2.5
24	2.0	2.0
IC7102		
1	6.4	6.4
2	5.2	5.2
3	5.7	5.7
4	0	0
5	5.7	5.7
6	5.7	5.7
7	0	0
8	6.4	6.4
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	6.4	6.4
Q7102		
E	3.0	3.0
C	0	0
B	2.3	2.3
Q7103		
E	2.8	2.8
C	0	0
B	2.1	2.1
Q7104		
E	3.0	3.0
C	0	0
B	2.3	2.3
Q7107		
E	-	-
C	-	-
B	-	-
Q7108		
E	-	-
C	-	-
B	-	-
Q7109		
E	-	-
C	-	-
B	-	-
Q7110		
E	-	-
C	-	-
B	-	-
Q7111		
E	0	0
C	6.2	6.2
B	0	0
Q7112		
E	0.6	0.6
C	11.5	11.5
B	0	0
CN7101		
1	0.2	5.0
2	0	0
3	0	0
4	2.3	2.3
5	0	0
6	1.2	1.2
7	11.5	11.5
8	0.7	0.7
9	11.5	11.5
CN7102		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	4.8	4.8
8	4.7	4.7
9	5.1	5.1
10	5.1	5.1
CN7103		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
CN7104		
1	2.1	2.1
2	0	0
3	2.3	2.3
4	0	0
5	5.7	5.7
6	0	0
7	5.6	5.6

<DEMODULATOR>

MODE PIN NO.	REC	PLAY
IC6701		
1	0.3	1.2
2	2.5	2.5
3	0	0
4	0	0
5	4.9	4.9
6	4.9	4.9
7	4.7	4.7
8	4.8	4.8
9	2.2	2.2
10	2.3	2.3
11	0	0
12	0.3	1.2
13	0.3	1.2
14	0.3	1.2
15	0.3	1.2
16	4.5	4.5
17	0	0
18	0.3	1.1
19	0	0.4
20	4.6	4.6
21	0	0.4
22	0	0.2
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	3.7	3.7
31	3.7	3.7
32	0	0
33	8.3	8.3
34	7.4	7.4
35	0	0
36	3.6	3.6
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	2.5	2.5
44	3.7	3.7
45	0	0
46	4.9	4.9
47	1.5	1.5
48	1.5	1.5
49	0	0.4
50	0	0
51	2.2	2.2
52	2.1	2.1
Q6701		
E	8.3	8.3
C	11.5	11.5
B	8.9	8.9
Q6702		
E	2.8	2.8
C	8.2	8.2
B	3.5	3.5
Q6704		
E	0	0
C	0	0
B	3.3	3.3
Q6705		
E	0	0
C	0	0
B	3.3	3.3
CN6701		
1	4.8	4.8
2	4.6	4.6
3	0	0
4	4.9	4.9
5	11.5	11.5
6	0	0
7	0	0
8	0	0
9	2.4	2.4
10	0	0
11	4.4	4.4

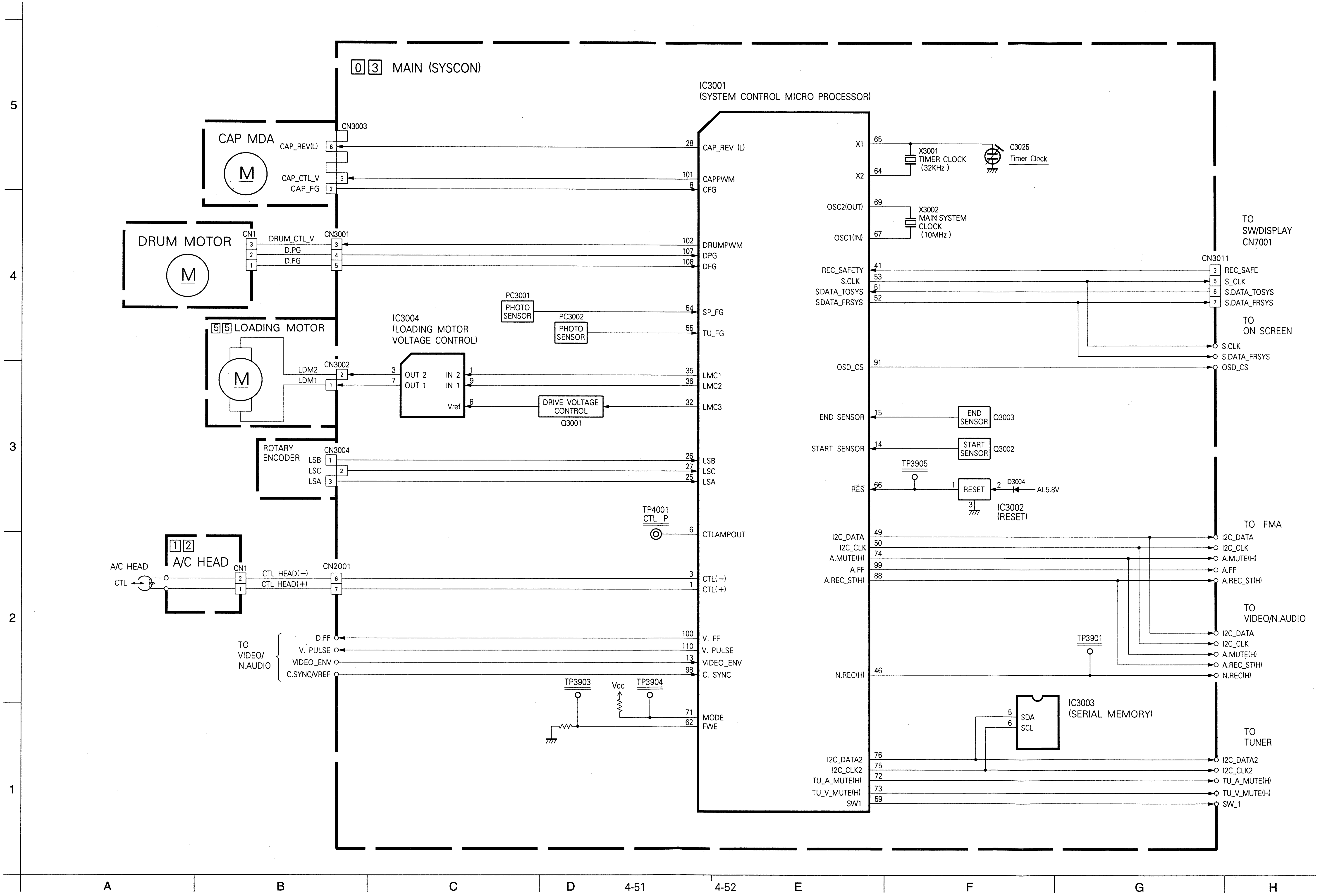
<SWITCH/DISPLAY>

MODE PIN NO.	REC	PLAY
IC7001		
1	5.1	5.1
2	2.2	2.4
3	0	0
4	2.2	2.2
5	5.1	5.1
6	5.1	5.1
7	5.1	5.1
8	5.1	5.1
9	5.1	5.1
10	5.1	5.1
11	5.1	5.1
12	4.4	4.4
13	1.0	1.0
14	5.1	5.1
15	4.5	4.5
16	-28.8	-28.8
17	-28.8	-28.8
18	-28.5	-28.5
19	-28.5	-28.5
20	5.1	5.1
21	-24.3	-24.3
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	5.1	5.1
IC7002		
1	5.1	5.1
2	5.1	5.1
3	0	0
CN7001		
1	-28.7	-28.7
2	-16.1	-16.1
3	-19.9	-19.9
4	0	0
5	0	0
6	5.1	5.1
7	4.5	4.5
8	1.1	1.1
9	5.1	5.1
10	4.5	4.5
11	5.1	5.1
12	5.1	5.1
13	0	0
14	5.1	5.1
FW7001		
1	5.1	5.1
2	0	0

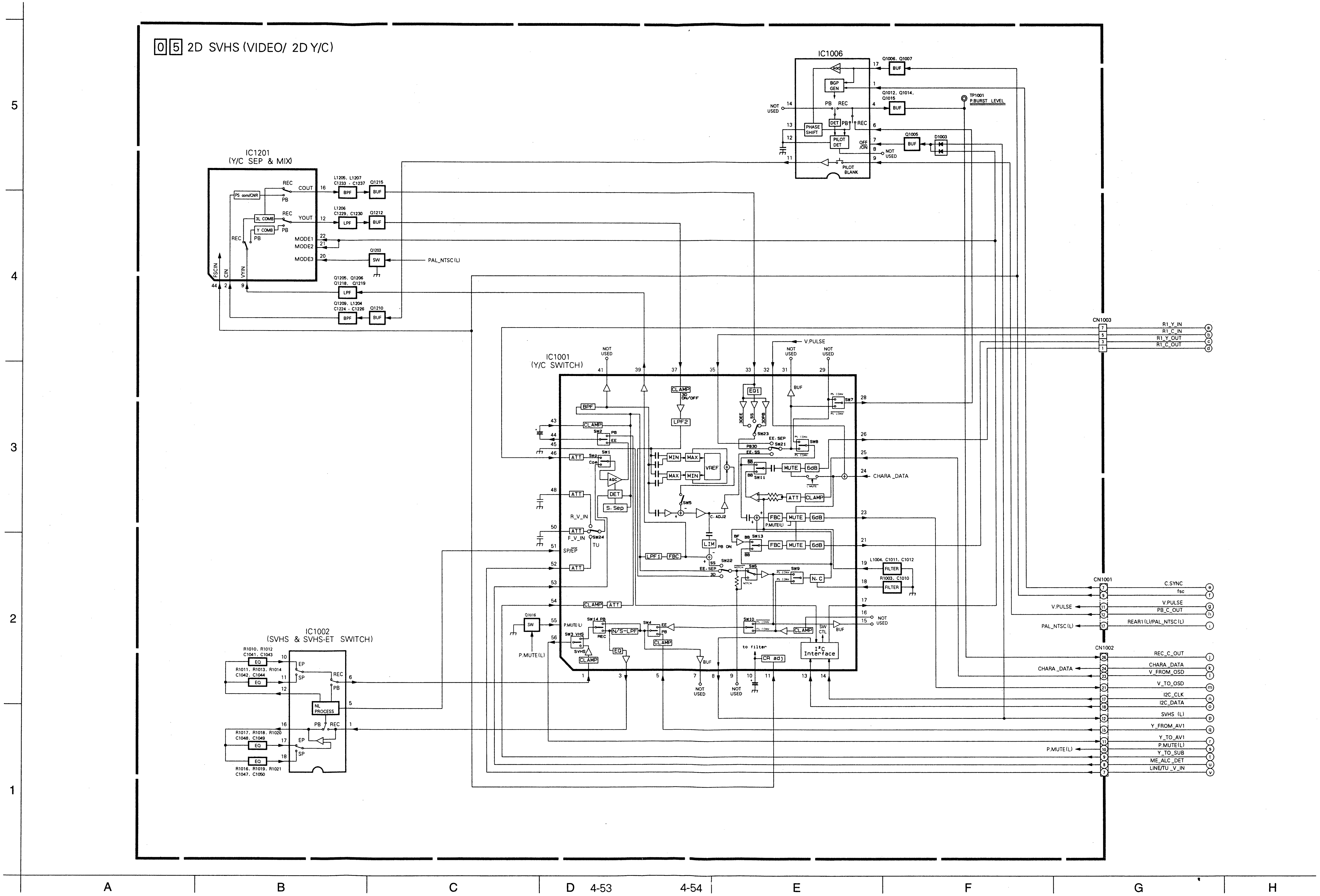
<REC SAFETY>

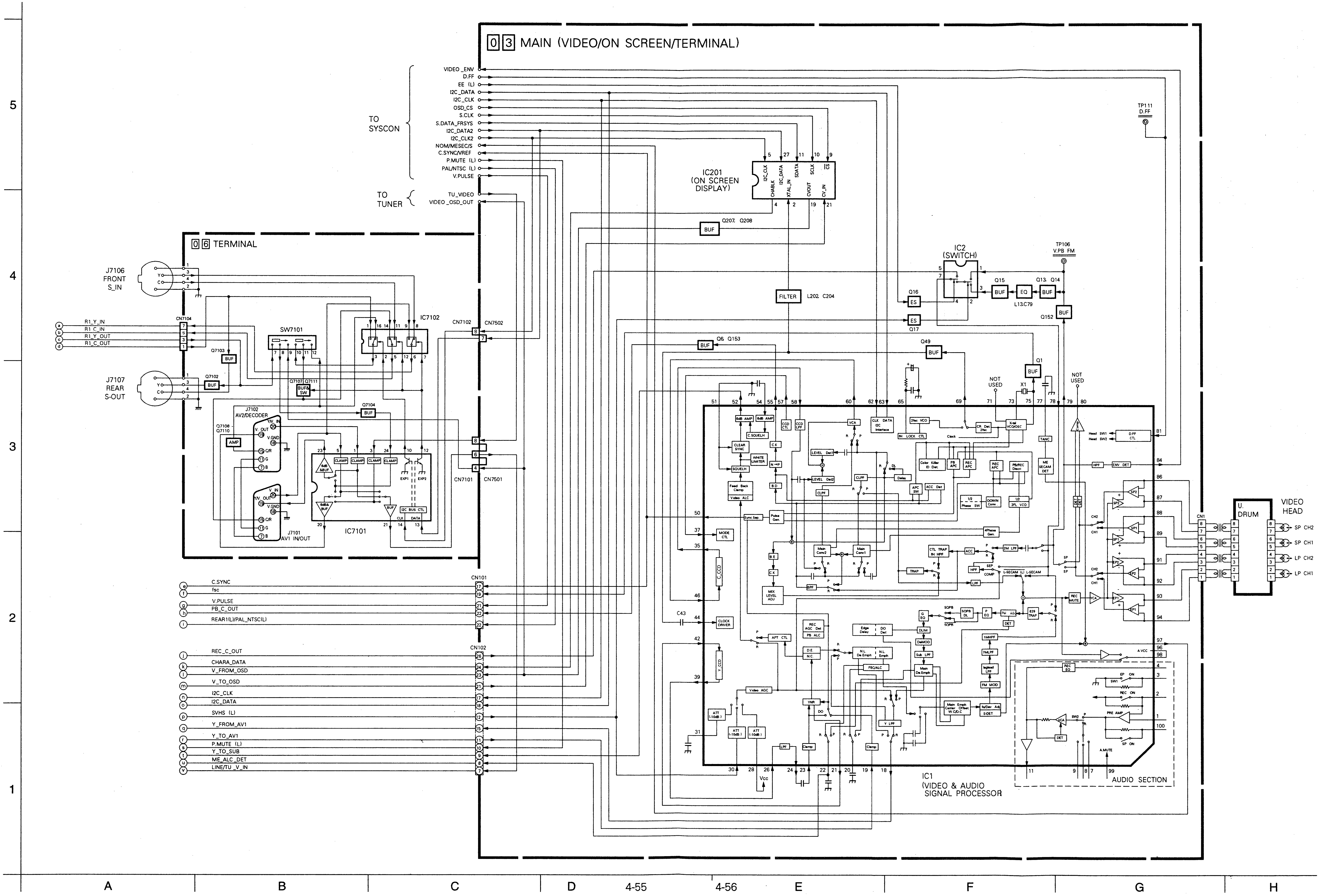
MODE PIN NO.	REC	PLAY
FW7001		
1	5.1	5.1
2	0	0

4.23 SYSTEM CONTROL BLOCK DIAGRAM

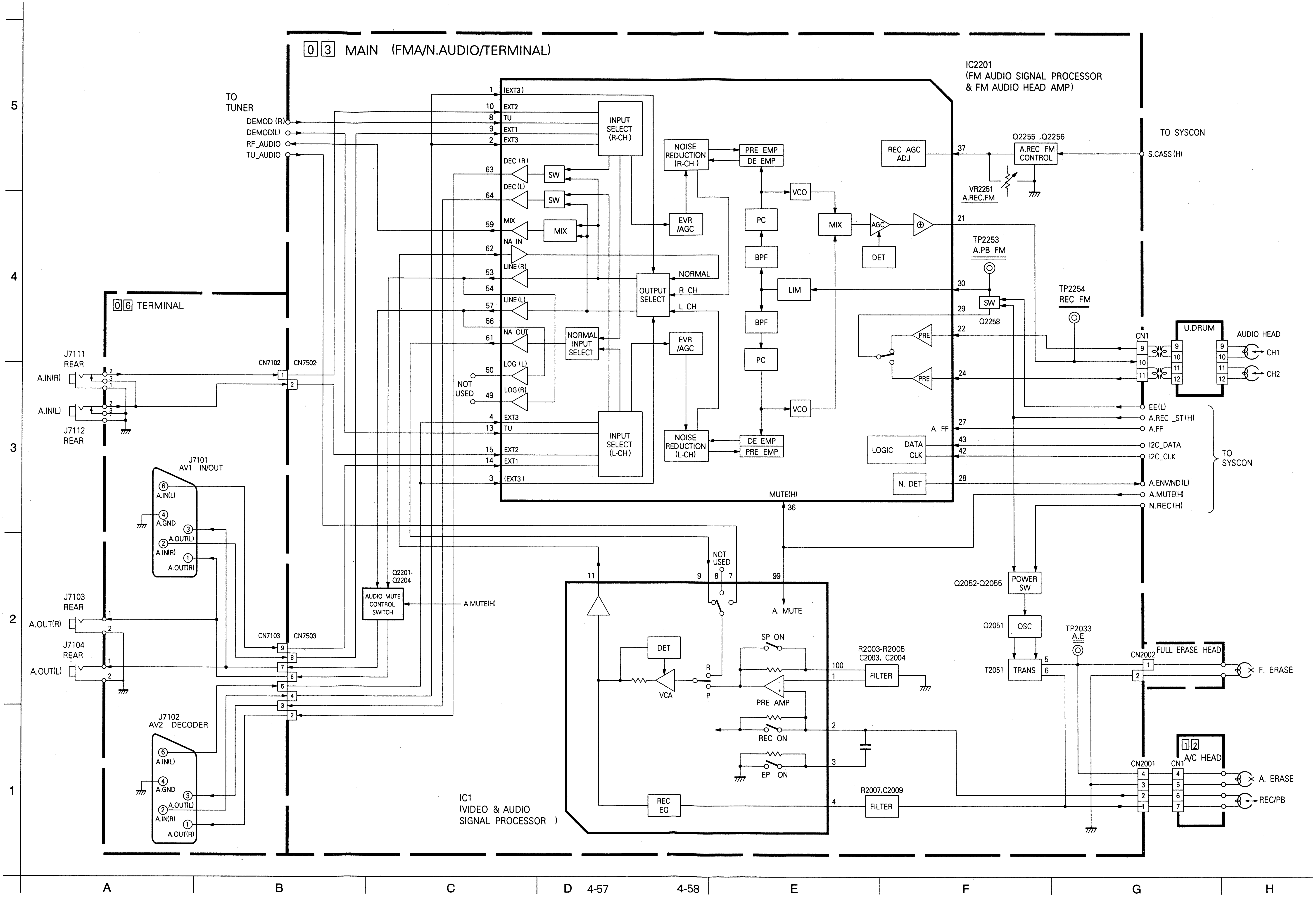

0 3 MAIN (SYSCON)
IC3001
(SYSTEM CONTROL MICRO PROCESSOR)
CAP MDA
M
CAP_REV(L)
CAP_CTL_V
CAP_FG
CN3003
DRUM MOTOR
M
CN1
DRUM_CTL_V
D.PG
D.FG
CN3001
5 5 LOADING MOTOR
M
LDM2
LDM1
CN3002
IC3004
(LOADING MOTOR
VOLTAGE CONTROL)
OUT 2
OUT 1
IN 2
IN 1
Vref
DRIVE VOLTAGE
CONTROL
Q3001
PC3001
PHOTO
SENSOR
PC3002
PHOTO
SENSOR
ROTARY
ENCODER
LSB
LSC
LSA
CN3004
TP4001
CTL. P
1 2
A/C HEAD
A/C HEAD
CTL
CN1
CTL HEAD(−)
CTL HEAD(+)
CN2001
TO
VIDEO/
N.AUDIO
D.FF
V. PULSE
VIDEO_ENV
C.SYNC/VREF
TP3903
Vcc
TP3904
28 CAP_REV (L)
101 CAPPWM
8 CFG
102 DRUMPWM
107 DPG
108 DFG
54 SP_FG
55 TU_FG
35 LMC1
36 LMC2
32 LMC3
26 LSB
27 LSC
25 LSA
6 CTLAMPOUT
3 CTL(−)
1 CTL(+)
100 V. FF
110 V. PULSE
13 VIDEO_ENV
98 C. SYNC
71 MODE
62 FWE
X1 65
X2 64
X3001
TIMER CLOCK
(32KHz)
C3025
Timer Clock
OSC2(OUT) 69
OSC1(IN) 67
X3002
MAIN SYSTEM
CLOCK
(10MHz)
REC_SAFETY 41
S.CLK 53
SDATA_TOSYS 51
SDATA_FRSYS 52
OSD_CS 91
END SENSOR 15
START SENSOR 14
END
SENSOR
Q3003
START
SENSOR
Q3002
TP3905
RES 66
RESET
D3004
AL5.8V
IC3002
(RESET)
I2C_DATA 49
I2C_CLK 50
A.MUTE(H) 74
A.FF 99
A.REC_ST(H) 88
N.REC(H) 46
TP3901
IC3003
(SERIAL MEMORY)
SDA
SCL
I2C_DATA2 76
I2C_CLK2 75
TU_A_MUTE(H) 72
TU_V_MUTE(H) 73
SW1 59
TO
SW/DISPLAY
CN7001
CN3011
REC_SAFE
S_CLK
S.DATA_TOSYS
S.DATA_FRSYS
TO
ON SCREEN
S.CLK
S.DATA_FRSYS
OSD_CS
TO FMA
I2C_DATA
I2C_CLK
A.MUTE(H)
A.FF
A.REC_ST(H)
TO
VIDEO/N.AUDIO
I2C_DATA
I2C_CLK
A.MUTE(H)
A.REC_ST(H)
N.REC(H)
TO
TUNER
I2C_DATA2
I2C_CLK2
TU_A_MUTE(H)
TU_V_MUTE(H)
SW_1
5
4
3
2
1
A
B
C
D
E
F
G
H

4.24 VIDEO BLOCK DIAGRAM


05 2D SVHS (VIDEO/ 2D Y/C)
IC1201
(Y/C SEP & MIX)
PS com/CNR
3L COMB
Y COMB
REC
PB
COUT
YOUT
MODE1
MODE2
MODE3
FSCIN
CIN
VYIN
L1205, L1207
C1233 - C1237
Q1215
BPF
BUF
L1206
C1229, C1230
Q1212
LPF
Q1203
SW
PAL_NTSC(L)
Q1205, Q1206
Q1218, Q1219
Q1209, L1204
C1224 - C1226
Q1210
IC1006
Q1006, Q1007
BGP GEN
PHASE SHIFT
DET
PILOT DET
PILOT BLANK
OFF/ON
NOT USED
Q1012, Q1014, Q1015
Q1005
D1003
TP1001
P.BURST LEVEL
IC1001
(Y/C SWITCH)
V.PULSE
CLAMP
ON/OFF
LPF2
EQ1
BPF
ATT
AGC
DET
S.Sep
MIN
MAX
VREF
C-ADJ2
LIM
LPF1
FBC
MUTE
6dB
N.C
FILTER
I²C Interface
CR adj
to filter
N/S-LPF
EQ
SW CTL
R_V_IN
F_V_IN
SP/EP
TU
PB ON
EE.SEP
EE.SS
PB3D
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW13
SW14
SW21
SW22
SW23
SW24
CHARA_DATA
L1004, C1011, C1012
R1003, C1010
Q1016
P.MUTE(L)
IC1002
(SVHS & SVHS-ET SWITCH)
R1010, R1012
C1041, C1043
R1011, R1013, R1014
C1042, C1044
R1017, R1018, R1020
C1048, C1049
R1016, R1019, R1021
C1047, C1050
NL PROCESS
EP
SP
CN1003
R1_Y_IN
R1_C_IN
R1_Y_OUT
R1_C_OUT
CN1001
C.SYNC
fsc
V.PULSE
PB_C_OUT
REAR1(L)/PAL_NTSC(L)
PAL_NTSC(L)
CN1002
REC_C_OUT
CHARA_DATA
V_FROM_OSD
V_TO_OSD
I2C_CLK
I2C_DATA
SVHS (L)
Y_FROM_AV1
Y_TO_AV1
P.MUTE(L)
Y_TO_SUB
ME_ALC_DET
LINE/TU_V_IN
5
4
3
2
1
A
B
C
D
E
F
G
H


03 MAIN (VIDEO/ON SCREEN/TERMINAL)
06 TERMINAL
TO SYSCON
VIDEO_ENV
D.FF
EE (L)
I2C_DATA
I2C_CLK
OSD_CS
S.CLK
S.DATA_FRSYS
I2C_DATA2
I2C_CLK2
NOM/MESEC/S
C.SYNC/VREF
P.MUTE (L)
PAL/NTSC (L)
V.PULSE
TO TUNER
TU_VIDEO
VIDEO_OSD_OUT
IC201 (ON SCREEN DISPLAY)
Q207, Q208
BUF
FILTER
L202, C204
IC2 (SWITCH)
TP106 V.PB FM
TP111 D.FF
Q15
Q13, Q14
EQ
L13,C79
Q16
Q17
ES
Q152
Q49
Q6, Q153
Q1
X1
NOT USED
J7106 FRONT S_IN
J7107 REAR S-OUT
CN7104
R1_Y_IN
R1_C_IN
R1_Y_OUT
R1_C_OUT
Q7103
Q7102
SW7101
IC7102
CN7102
CN7502
Q7107, Q7111
BUF& SW
Q7104
J7102 AV2/DECODER
Q7108~Q7110
AMP
J7101 AV1 IN/OUT
IC7101
CLAMP
6dB &BUF
I2C BUS CTL
CN7101
CN7501
CN101
C.SYNC
fsc
V.PULSE
PB_C_OUT
REAR1(L)/PAL_NTSC(L)
CN102
REC_C_OUT
CHARA_DATA
V_FROM_OSD
V_TO_OSD
I2C_CLK
I2C_DATA
SVHS (L)
Y_FROM_AV1
Y_TO_AV1
P.MUTE (L)
Y_TO_SUB
ME_ALC_DET
LINE/TU_V_IN
C43
IC1 (VIDEO & AUDIO SIGNAL PROCESSOR)
AUDIO SECTION
MODE CTL
CLOCK DRIVER
C_CCD
Y_CCD
ATT (-10dB)
CN1
U. DRUM
VIDEO HEAD
SP CH2
SP CH1
LP CH2
LP CH1
A.VCC
A.MUTE
Vcc
A
B
C
D
E
F
G
H
1
2
3
4
5

4.25 AUDIO BLOCK DIAGRAM



03 MAIN (FMA/N.AUDIO/TERMINAL)
IC2201
(FM AUDIO SIGNAL PROCESSOR
& FM AUDIO HEAD AMP)
TO TUNER
DEMOD (R)
DEMOD(L)
RF_AUDIO
TU_AUDIO
(EXT3)
EXT2
TU
EXT1
EXT3
INPUT SELECT (R-CH)
DEC (R)
DEC (L)
SW
MIX
NA IN
LINE (R)
LINE (L)
NA OUT
LOG (L)
LOG (R)
NOT USED
NORMAL INPUT SELECT
OUTPUT SELECT
NORMAL
R CH
L CH
INPUT SELECT (L-CH)
NOISE REDUCTION (R-CH)
NOISE REDUCTION (L-CH)
EVR /AGC
PRE EMP
DE EMP
PC
BPF
LIM
VCO
AGC
DET
REC AGC ADJ
LOGIC
DATA
CLK
N. DET
A. FF
MUTE(H)
PRE
Q2258
TP2253 A.PB FM
TP2254 REC FM
Q2255 ,Q2256
A.REC FM CONTROL
VR2251 A.REC.FM
TO SYSCON
S.CASS (H)
CN1
U.DRUM
AUDIO HEAD
CH1
CH2
EE(L)
A.REC _ST(H)
A.FF
I2C_DATA
I2C_CLK
A.ENV/ND(L)
A.MUTE(H)
N.REC(H)
TO SYSCON
06 TERMINAL
J7111 REAR
A.IN(R)
A.IN(L)
J7112 REAR
CN7102
CN7502
J7101 AV1 IN/OUT
A.IN(L)
A.GND
A.OUT(L)
A.IN(R)
A.OUT(R)
J7103 REAR
A.OUT(R)
J7104 REAR
A.OUT(L)
J7102 AV2 DECODER
CN7103
CN7503
AUDIO MUTE CONTROL SWITCH
Q2201-Q2204
A.MUTE(H)
IC1 (VIDEO & AUDIO SIGNAL PROCESSOR)
NOT USED
A. MUTE
DET
VCA
R
P
SP ON
PRE AMP
REC ON
EP ON
REC EQ
R2003-R2005 C2003, C2004
FILTER
R2007,C2009
FILTER
Q2052-Q2055
POWER SW
Q2051
OSC
T2051
TRANS
TP2033 A.E
CN2002
FULL ERASE HEAD
F. ERASE
CN2001
12 A/C HEAD
A. ERASE
REC/PB
1 10 8 9 2 63 64 59 62 53 54 57 56 61 50 49 4 13 15 14 3
37 21 30 29 22 24 27 43 42 28 36
11 9 8 7 99 100 1 2 3 4 5 6
A B C D E F G H
1 2 3 4 5

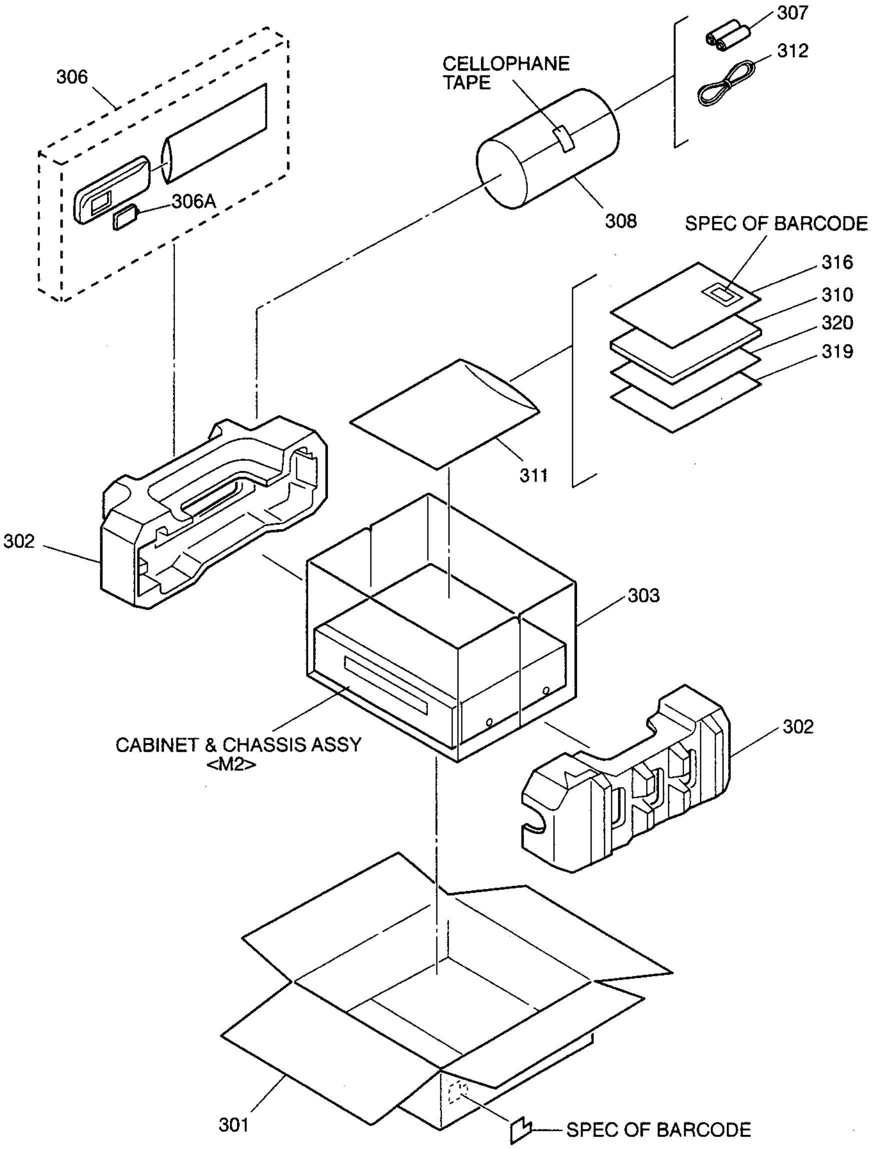
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱

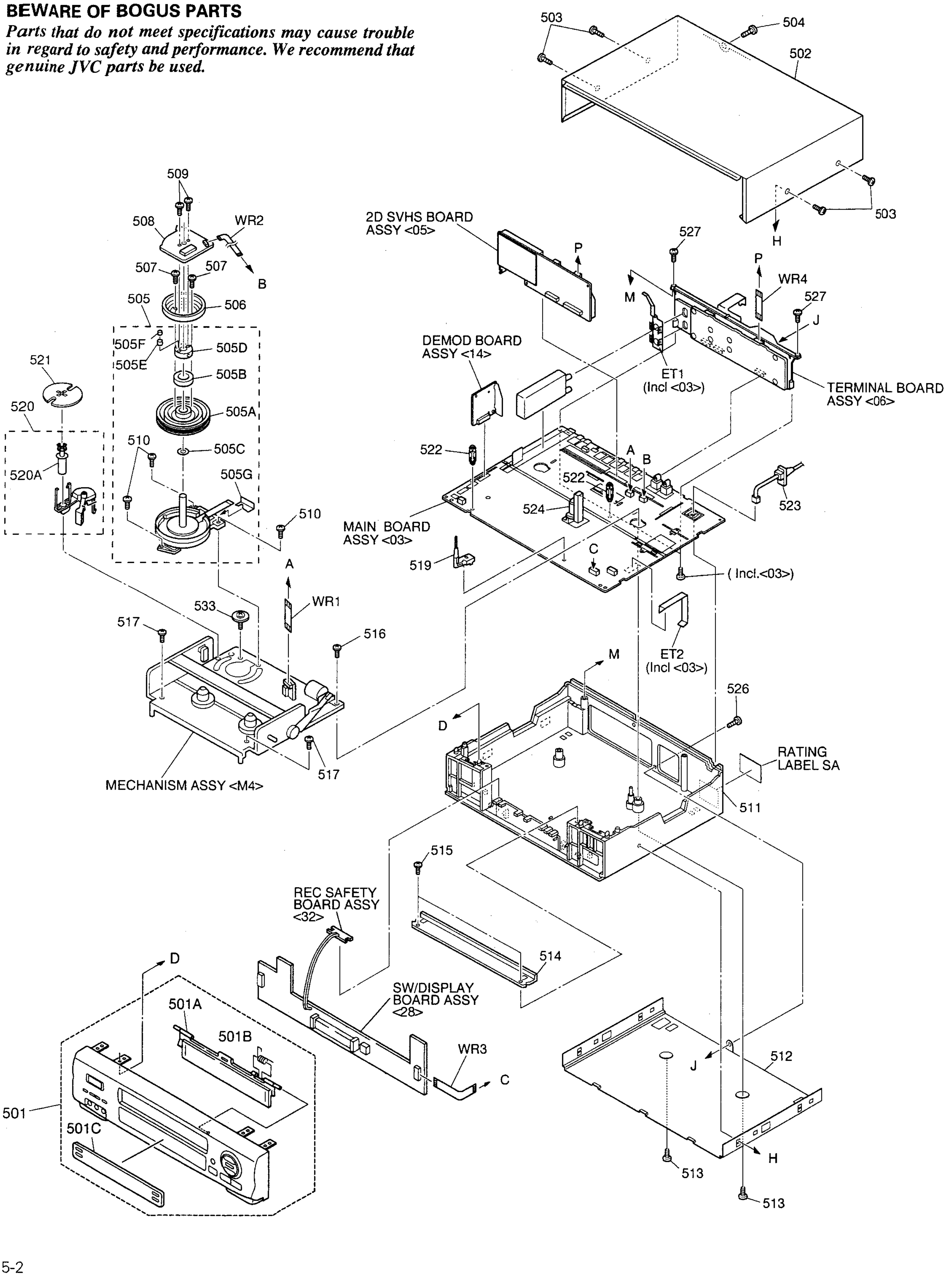
PACKING AND ACCESSORY ASSEMBLY <M1>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		301	LP30615-019A	PACKING CASE,S6600EU
			LP30615-025A	PACKING CASE,S6611EU
		302	LP30606-002B	CUSHION ASSY
		303	PQM30021-95	POLY BAG
		306	LP20337-013A	REMOTE CONTROLLER
		306A	LP40254-004A	COVER(BATTERY)
		307	–	BATTERY,X2("R6" TYPE)
		308	QPC02202230P	POLY BAG
	⚠	310	LPT0289-001A	INST.BOOK(EN)
	⚠		LPT0289-002A	INST.BOOK(GE)
	⚠		LPT0289-003A	INST.BOOK(FR)
	⚠		LPT0289-004A	INST.BOOK(DU)
	⚠		LPT0289-005A	INST.BOOK(SP)
	⚠		LPT0289-006A	INST.BOOK(IT)
	⚠		LPT0289-007A	INST.BOOK(DA)
	⚠		LPT0289-008A	INST.BOOK(FI)
	⚠		LPT0289-009A	INST.BOOK(SW)
	⚠		LPT0289-010A	INST.BOOK(NO)
	⚠		LPT0289-011A	INST.BOOK(PT)
	⚠		LPT0289-012A	INST.BOOK(GR)
	⚠		LPT0289-013A	INST.BOOK(CZ),S6600EU
	⚠		LPT0289-014A	INST.BOOK(PO),S6600EU
	⚠		LPT0289-015A	INST.BOOK(HU),S6600EU
			LPT0289-016A	INST.BOOK(RU),S6600EU
		311	QPC02503530P	POLY BAG
		312	PEAC0300-02	RF CABLE
		316	BT-54013-1	WARRANTY CARD
		319	PQ45146-179	SHEET(SPAIN),S6600EU
			PQ45146-186	SHEET(SPAIN),S6611EU
		320	LP40605-001A	SHEET

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.


503
504
502
503
H
509
508
WR2
507
507
B
505
506
505F
505E
505D
505B
505A
505C
505G
510
510
510
521
520
520A
2D SVHS BOARD ASSY <05>
P
527
P
WR4
527
M
J
ET1 (Incl <03>)
TERMINAL BOARD ASSY <06>
DEMOD BOARD ASSY <14>
522
522
A
B
524
523
MAIN BOARD ASSY <03>
519
C
(Incl.<03>)
A
WR1
533
517
516
517
MECHANISM ASSY <M4>
ET2 (Incl <03>)
M
526
D
RATING LABEL SA
511
515
REC SAFETY BOARD ASSY <32>
514
SW/DISPLAY BOARD ASSY <28>
D
501A
501B
WR3
C
501
501C
J
512
H
513
513

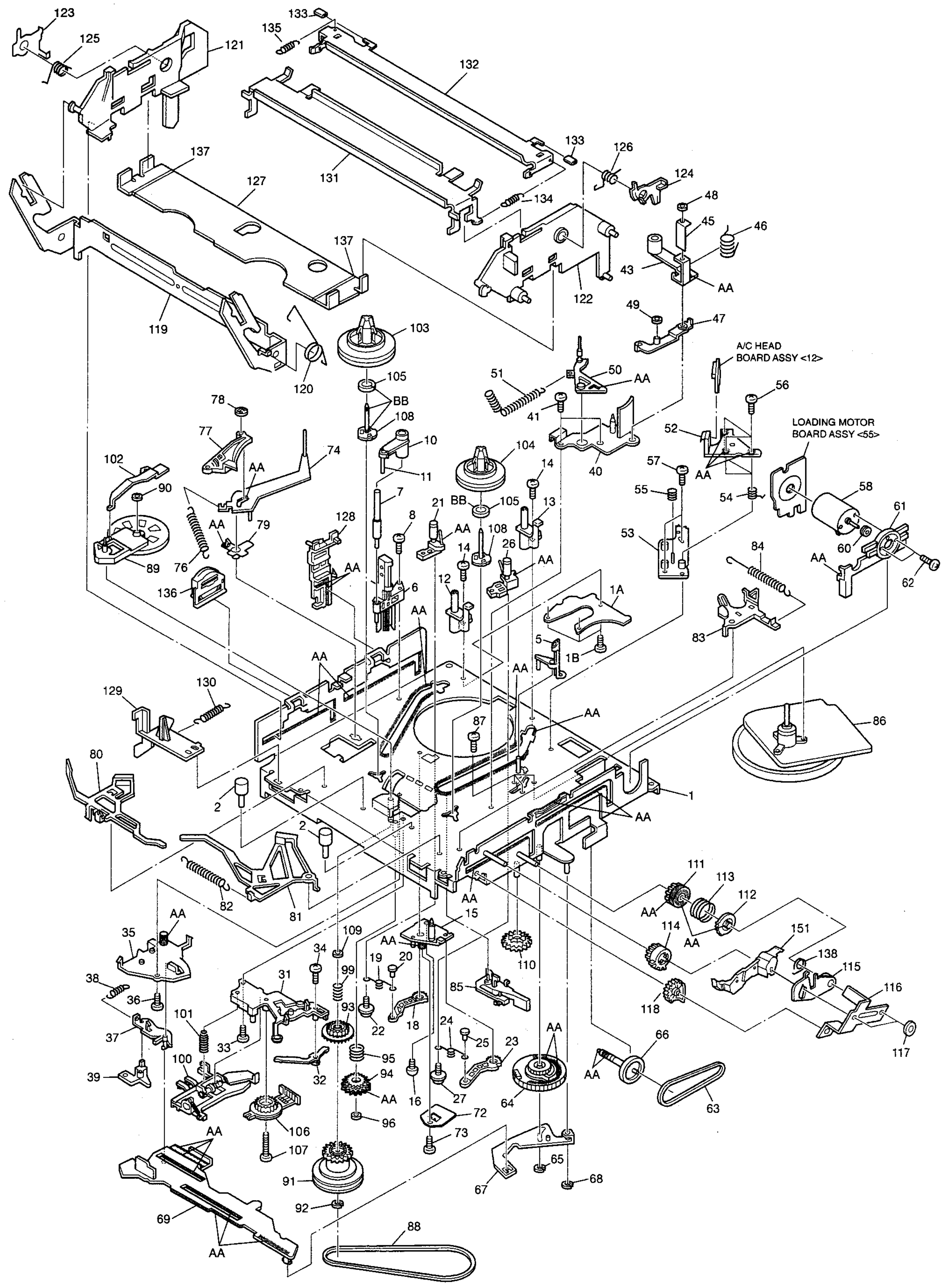
* * *

CABINET AND CHASSIS ASSEMBLY <M2>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	⚠	501	LP10217-011C	FRONT PANEL ASSY,S6600EU
	⚠		LP10217-018C	FRONT PANEL ASSY,S6611EU
		501A	LP20342-034A	CASSETTE DOOR,S6600EU
			LP20342-040A	CASSETTE DOOR,S6611EU
		501B	PQ46448	TORSION SPRING
		501C	LP30531-008B	DISPLAY WINDOW,S6600EU
			LP30531-014A	DISPLAY WINDOW,S6611EU
	⚠	502	PQ11676-87	TOP COVER,S6600EU
	⚠		PQ11676-91	TOP COVER,S6611EU
		503	QYTDSF3010M	SCREW,X4 TOP COVER(SIDE),S6611EU
			QYTDSF3010R	SCREW,X4 TOP COVER(SIDE),S6600EU
		504	QYTDSF3010M	SCREW,TOP COVER(REAR)
		505	LP20617-011A	DRUM SUB ASSY
		505A	LP20616-005A	UPPER DRUM ASSY
		505B	PDM4439	CAP
		505C	PDM4444-19-2	WASHER
		505D	LP40572-001A	COLLAR ASSY
		505E	LP40323-001A	CONTACT
		505F	LP30004-014A	COMPRESSION SPRING
		505G	LP40174-001B	FPC PLATE
		506	PDZ0179-1-4	ROTOR ASSY
		507	QYSPSP3006Z	SCREW,X2
		508	PDZ0180-1-2	STATOR ASSY
		509	QYSPSPH2606Z	SCREW,X2
		510	QYTDST2610Z	SCREW,X3 DRUM
	⚠	511	LP10116-003G	BOTTOM CHASSIS
	⚠	512	PQ11668-2-11	BOTTOM COVER
		513	QYTDSF3010Z	SCREW,X2 BOTTOM COVER
		514	LP30312-001B	BRACKET(CHASSIS)
		515	QYTDSF3010Z	SCREW,X2 BRACKET(CHASSIS)
		516	QYTDSF4012Z	SCREW,MECHA
		517	QYTDSF3010Z	SCREW,X2 MECHA
		519	LP40407-001A	KNOB ASSY
		520	LP40370-001E	ROLLER ARM ASSY
		520A	PDM4311A-1	ROLLER ASSY
		521	PQ45160	INERTIA PLATE
		522	LP40226-001A	PC SUPPORT,X2
	⚠	523	QMP4A10-170	POWER CORD
		524	LP40253-001B	STOPPER
		526	QYTDSF3010M	SCREW,TERMINAL
		527	QYTPSFG3010Z	SCREW,X2 TERMINAL
		533	PQ40413	SPECIAL SCREW,MECHA
		WR1	QUQ112-0714CG	FFC WIRE,A/C HEAD CN2001
		WR2	QUQ212-0520CG	FFC WIRE,DRUM CN3001
		WR3	QUQ112-1414CG	FFC WIRE,DISPLAY CN3011
		WR4	QUQ112-0708CG	FFC WIRE,TERMINAL CN1003

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

5.3 MECHANISM ASSEMBLY <M4>


123
125
121
133
135
132
137
127
131
133
126
124
134
48
45
46
43
AA
137
122
119
49
47
103
120
A/C HEAD
BOARD ASSY <12>
105
BB
108
51
50
AA
56
78
41
52
LOADING MOTOR
BOARD ASSY <55>
77
10
74
40
102
AA
11
104
14
57
AA
90
7
55
54
58
21
BB
105
13
61
8
AA
108
79
128
AA
53
84
AA
60
14
26
62
AA
89
76
AA
136
6
12
1A
AA
AA
83
5
1B
AA
129
130
AA
87
86
80
1
2
AA
2
111
113
82
81
AA
112
AA
15
35
109
AA
114
AA
151
34
20
110
38
99
19
138
31
115
36
93
85
116
101
118
22
18
24
37
33
95
25
23
AA
66
100
94
AA
39
32
AA
16
27
64
117
63
96
72
AA
106
73
107
65
91
67
68
92
69
88
AA

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

****

MECHANISM ASSEMBLY <M4>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
1	LP20228-008H	MAIN DECK ASSY
1A	LP40275-003A	PLATE(SUPPLY)
1B	QYTDST2606Z	SCREW,X4
2	PQ46302-1-3	ADJUST PIN,X2
5	LP30492-002B	GIDE POLE GUARD
6	NAH0001-001	FULL ERASE HEAD
7	LP40098-001B	GUIDE POLE(SUPPLY)
8	QYTDST2608Z	SCREW,FE HEAD
10	LP30459-002A	TENSION STUD BASE
11	LP40367-002A	TENSION STUD
12	LP30409-002C	UV CATCHER 2
13	LP30409-002C	UV CATCHER 2
14	QYTPST2606Z	SCREW,X2 UV CATCHER
15	LP30223-003C	LOADING ARM GEAR SHAFT
16	QYTDST2606Z	SCREW
18	LP30224-001A	LOADING ARM GEAR(SUPPLY)
19	LP40099-001A	TORSION ARM
20	LP40100-001A	PIN
21	LP40101-002C	POLE BASE ASSY(SUPPLY)
22	QYSPSTG2606Z	SCREW
23	LP40103-002B	LOADING ARM GEAR(TAKE UP)
24	LP40099-001A	TORSION ARM
25	LP40100-001A	PIN
26	LP40104-003A	POLE BASE ASSY(TAKE UP)
27	QYSPSTG2606Z	SCREW
31	LP20233-003J	ROTARY ENCODER GUIDE
32	LP30499-001C	BRAKE LEVER
33	QYTPST2606Z	SCREW
34	QYTPST2608Z	SCREW
35	LP30226-004B	CONTROL PLATE GUIDE
36	QYTPST2605Z	SCREW
37	LP30249-003B	TAKE UP LEVER
38	LP30003-006A	TENSION SPRING
39	LP40119-002A	T.UP HEAD
40	LP20234-004B	LID GUIDE
41	QYTDST2606Z	SCREW,X2
43	LP40105-001B	PINCH ROLLER ARM ASSY
45	LP40478-001A	PINCH ROLLER SHEET2
46	LP40148-002A	TORSION SPRING
47	LP40149-001B	P.LEVER ASSY
48	LP30016-002A	SLIT WASHER
50	LP40106-002E	GUIDE ARM ASSY
51	LP40134-001C	TENSION SPRING
52	QAH0010-004	AC HEAD
53	LP30228-001A	HEAD BASE
54	LP30004-013A	COMPRESSION SPRING,X3
55	LP40236-001A	COMPRESSION SPRING
56	LP40213-002B	SPECIAL SCREW,X3
57	QYTDST2608Z	SCREW,X2
58	QAR0023-001	LOADING MOTOR
60	PQ43546-1-2	MOTOR PULLEY
61	LP30230-003A	MOTOR GUIDE
62	QYTPSP3003Z	SCREW,X2
63	LP30005-003A	BELT,LOADING MOTOR
64	LP20791-002B	CONTROL CAM
65	PQM30017-24	SLIT WASHER
66	LP40120-001A	WORM GEAR
67	LP40107-002A	LINK LEVER ASSY
68	PQM30017-24	SLIT WASHER
69	LP10201-002E	CONTROL PLATE
72	LP40379-001B	CONTROL BRACKET(1)
73	QYTDSF2608M	SCREW
74	LP40108-002A	TENSION ARM ASSY
76	LP30003-010A	TENSION SPRING
77	LP40109-003D	TENSION BRAKE ASSY
78	PQ46302-1-3	ADJUST PIN
79	LP30232-002A	T.ARM BEARING
80	LP40532-004A	MAIN BRAKE ASSY (SUPPLY)
81	LP40111-006A	MAIN BRAKE AY (TAKE-UP)
82	LP30003-002A	TENSION SPRING
83	LP40112-001F	SUB BRAKE ASSY(TAKE UP)
84	LP40357-002A	TENSION SPRING
85	LP40461-001A	CAPSTAN BRAKE ASSY
86	QAR0087-003	CAPSTAN MOTOR
87	QYTDSF2606M	SCREW,X3
88	LP30005-007A	BELT,CAPSTAN MOTOR
89	LP40114-008A	IDLER ARM ASSY
90	LP30016-001A	SLIT WASHER
91	LP40576-001A	CLUTCH UNIT 2
92	PQM30017-47	SLIT WASHER
93	LP40446-002B	CLUTCH GEAR 1
94	LP40442-001A	DIRECT GEAR
95	LP40483-002A	COMPRESSION SPRING,D.GEAR
96	LP30016-001A	SLIT WASHER,D.GEAR
99	LP40554-001A	COMPRESSION SPRING,C.GEAR1
100	LP40484-001F	CHANGE LEVER ASSY
101	LP40512-002B	COMPRESSION SPRING
102	LP30236-002B	IDLER LEVER
103	LP40420-001A	REEL DISK ASSY(SUPPLY)
104	LP40421-001A	REEL DISK ASSY(TAKE UP)
105	LP30017-015A	SPACER,X2
106	QSW0554-003	ROTARY ENCODER
107	QYTPST2620Z	SCREW,R.ENCODER
108	LP40123-001A	REEL SHAFT,X2
109	LP30017-019A	SPACER,C.GEAR1
110	LP30237-002B	CASSETTE GEAR
111	LP30239-002F	LIMIT GEAR(1)
112	LP30240-002G	LIMIT GEAR(2)
113	LP40136-001E	TORSION SPRING
114	LP30242-002A	RELAY GEAR
115	LP30339-002E	OPENER GUIDE
116	LP40214-001B	C.H.BRACKET
117	PQM30017-47	SLIT WASHER
118	LP30243-001D	DRIVE GEAR
119	LP20240-001C	DRIVE ARM
120	LP40137-001A	TORSION SPRING
121	LP10081-002L	SIDE HOLDER(L)
122	LP10082-002M	SIDE HOLDER(R)
123	LP30255-006A	LOCK LEVER(L)
124	LP30256-001H	LOCK LEVER(R)
125	LP40168-001A	TORSION SPRING(L)
126	LP40218-001B	TORSION SPRING(R)
127	LP30257-001F	CASSETTE HOLDER
128	LP30244-002G	GUIDE RAIL
129	LP30245-002E	REC SAFETY LEVE
130	LP30003-004A	TENSION SPRING
131	LP20578-001C	TOP GUIDE
132	LP30500-001C	HOLD PLATE
133	LP40450-003A	PAD,X2 HOLD PLATE
134	LP30003-025B	TENSION SPRING
135	LP30003-024A	TENSION SPRING
136	LP40481-003A	ROLLER CAM ASSY
137	LP30019-014A	PAD,X2 CASSETTE HOLDER
138	LP40545-001A	TORSION SPRING,OPENER GUIDE
151	LP20324-002F	DOOR OPENER

5.4 ELECTRICAL PARTS LIST

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MAIN BOARD ASSEMBLY <03>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW1	LPA10048-78E	MAIN BOARD ASSY
IC1	JCP8017-MSA	IC
IC2	MM1113XF	IC
IC201	LC74775-9750	IC
IC2201	AN3650NFBP	IC
	or AN3651FBP	IC
IC3001	HD6432194A56F	IC
IC3002	S-80728AN-DR-X	IC
	or S-80828ANUP-W	IC
IC3003	M24C08-BN6	IC
	or S-24C08ADP	IC
	or X24C08P	IC
	or 24LC08B/P	IC
	or AT24C08-10PC	IC
IC3004	TA7291S	IC
IC5301	LA5634-N	IC
IC6080	BA15218F-XE	IC
Q1	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q6	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q13	2SD1819A/QRS/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q14	2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
Q15	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q16	UN511E	TRANSISTOR
	or RN2309	TRANSISTOR
	or DTA144WU	TRANSISTOR
	or PDTA144WU	TRANSISTOR
Q17	UN521E	TRANSISTOR
	or RN1309	TRANSISTOR
	or DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
Q18	UN521E	TRANSISTOR
	or RN1309	TRANSISTOR
	or DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
Q34	2SC4081/S/-X	TRANSISTOR
Q35	2SC4081/S/-X	TRANSISTOR
Q36	2SC4081/S/-X	TRANSISTOR
Q37	2SC4081/S/-X	TRANSISTOR
Q47	2SK433/D/-W	JUNCTION FET
Q48	2SK433/D/-W	JUNCTION FET
Q49	2SC3936/BC/-X	TRANSISTOR
Q55	UN521E	TRANSISTOR
	or DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
Q101	UN521E	TRANSISTOR
	or RN1309	TRANSISTOR
	or DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
Q152	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QRS/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q153	2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
Q207	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
Q208	2SD1819A/QRS/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2001	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2002	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q2003	DTA144WU	TRANSISTOR
	or PDTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q2051	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2052	2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A/QR/-X	TRANSISTOR
Q2053	DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q2054	2SA1576A/QR/-X	TRANSISTOR
	or 2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q2055	DTC144WU	TRANSISTOR
	or PDTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q2151	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2201	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2202	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q2203	DTA144WU	TRANSISTOR
	or PDTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q2204	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
	or PDTC144WU	TRANSISTOR
Q2253	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
			or PDTC114EU	TRANSISTOR
		Q2255	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q2256	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or UN521E	TRANSISTOR
			or RN1309	TRANSISTOR
		Q2258	DTA144WU	TRANSISTOR
			or RN2309	TRANSISTOR
			or UN511E	TRANSISTOR
			or PDTA144WU	TRANSISTOR
		Q3001	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q3002	PTZ-NV16	PHOTO TRANSISTOR
		Q3003	PTZ-NV16	PHOTO TRANSISTOR
		Q3004	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q3005	2SC1740S/QRS/-T	TRANSISTOR
			or 2SC3199/YG/-T	TRANSISTOR
		Q3008	UN521E	TRANSISTOR
			or RN1309	TRANSISTOR
			or DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
		Q4001	UN5211	TRANSISTOR
			or RN1302	TRANSISTOR
			or DTC114EU	TRANSISTOR
			or PDTC114EU	TRANSISTOR
		Q5101	2SK2632-CB14	POWER MOS FET
			or 2SK2632	POWER MOS FET
			or 2SK2129	POWER MOS FET
			or 2SK2129-LT	POWER MOS FET
		Q5102	2SD2144S/UV/-T	TRANSISTOR
		Q5303	2SD2144S/UVW/-T	TRANSISTOR
		Q5304	2SD1450/ST/-T	TRANSISTOR
			or 2SD1302/ST/-T	TRANSISTOR
		Q5305	UN5111	TRANSISTOR
			or DTA114EU	TRANSISTOR
			or PDTA114EU	TRANSISTOR
			or RN2302	TRANSISTOR
		Q5306	2SB1256	TRANSISTOR
		Q5310	UN5211	TRANSISTOR
			or DTC114EU	TRANSISTOR
			or PDTC114EU	TRANSISTOR
			or RN1302	TRANSISTOR
		Q5311	2SA1576A/RS/-X	TRANSISTOR
			or 2SB1218A/RS/-X	TRANSISTOR
		Q5312	2SA1745/6-7/-X	TRANSISTOR
		Q6030	2SB1218A/RS/-X	TRANSISTOR
		Q6031	UN5211	TRANSISTOR
			or RN1302	TRANSISTOR
			or PDTC114EU	TRANSISTOR
			or DTC114EU	TRANSISTOR
		Q6032	UN5211	TRANSISTOR
			or RN1302	TRANSISTOR
			or PDTC114EU	TRANSISTOR
			or DTC114EU	TRANSISTOR
		D16	DA204U	DIODE

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		D17	DA204U	DIODE	
		D24	DA204U	DIODE	
		D201	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10V
		D202	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10V
		D203	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10V
		D2001	1SS133	DIODE	
			or 1N4148M	DIODE	
		D2201	11ES2	DIODE	
		D3001	LNB2301L01VI	LE DIODE	
		D3002	1SS133	DIODE	
		D3003	RD39ES/B3/-T2	ZENER DIODE	
			or MTZJ39C	ZENER DIODE	
		D3004	11E2-T5	DIODE	
		D3005	11E2-T5	DIODE	
		D3008	1SS355	DIODE	
		D4001	1SS355	DIODE	
		D4002	1SS355	DIODE	
		D5001	S1WB(A)60F4102	BRIDGE DIODE	
			or S1WB(A)60F4062X	BRIDGE DIODE	
			or S1WB(A)60F4072X	BRIDGE DIODE	
		D5101	AU01	FR DIODE	
			or ERA18-04-T2	FR DIODE	
			or PG104RS	FR DIODE	
			or 10ELS4	FR DIODE	
			or 1SR153-400-T2	FR DIODE	
		D5102	AU01	FR DIODE	
			or ERA18-04-T2	FR DIODE	
			or PG104RS	FR DIODE	
			or 10ELS4	FR DIODE	
			or 1SR153-400-T2	FR DIODE	
		D5103	1SS133	DIODE	
		D5105	1SS133	DIODE	
		D5201	AU01Z	FR DIODE	
			or 10ELS2	FR DIODE	
		D5202	FML-12S	FR DIODE	
			or MA644	FR DIODE	
			or FCF06A20	FR DIODE	
			or YG901C2	FR DIODE	
		D5206	FMB-24	BARRIER DIODE	
			or FSQ05A04B	SB DIODE	
			or YG801C04	SB DIODE	
			or MA7D49	SB DIODE	
		D5210	AU01Z	FR DIODE	
			or ERA18-02-T2	FR DIODE	
			or 10ELS2	FR DIODE	
			or 1SR153-400-T2	FR DIODE	
			or PG104RS	FR DIODE	
		D5211	AU01Z	FR DIODE	
			or ERA18-02-T2	FR DIODE	
			or 1SR153-400-T2	FR DIODE	
			or 10ELS2	FR DIODE	
			or PG104RS	FR DIODE	
		D5301	MTZJ15A	ZENER DIODE	
			or RD15ES/B1/-T2	ZENER DIODE	
		D5302	MTZJ6.8A	ZENER DIODE	
			or RD6.8ES/B1/-T2	ZENER DIODE	
		D5303	MTZJ27C	ZENER DIODE	
			or RD27ES/B3/-T2	ZENER DIODE	
		D5304	1SS133	DIODE	
		D5307	1SS133	DIODE	

#	⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
	D5308	1SS133	DIODE	
	D5309	1SS133	DIODE	
	D5311	RD5.1ES/B3/-T2	ZENER DIODE	
		or MTZJ5.1C	ZENER DIODE	
	D6002	HZ30-2L-T2	ZENER DIODE	
		or HZ30-2LTD	Z DIODE (M)	
	R1	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
	R2	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
	R3	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R4	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
	R5	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R6	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R7	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R10	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R11	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
	R13	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
	R15	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R16	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R23	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R24	NRVA02D-622X	CMF RESISTOR	6.2kΩ,1/10W
	R25	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10W
	R46	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R47	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
	R48	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
	R49	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
	R50	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R52	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R54	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R55	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	R56	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R57	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R60	NRSA02J-563X	MG RESISTOR	56kΩ,1/10W
	R62	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R64	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
	R68	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
	R69	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
	R71	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R73	NRSA02J-683X	MG RESISTOR	68kΩ,1/10W
	R94	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
	R95	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R96	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R101	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
	R120	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R121	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R137	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R158	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R168	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R169	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R170	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R171	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
	R181	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R195	NRSA02J-684X	MG RESISTOR	680kΩ,1/10W
	R197	NRSA02J-106X	MG RESISTOR	10MΩ,1/10W
	R201	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R202	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R208	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R209	NRSA02J-512X	MG RESISTOR	5.1kΩ,1/10W
	R210	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W
	R211	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
	R212	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
	R213	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W

#	⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
	R216	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R218	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R224	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R225	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
	R2001	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R2002	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R2003	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2004	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
	R2005	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
	R2006	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
	R2007	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
	R2009	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R2013	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R2014	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
	R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R2020	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R2053	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R2054	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
	R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
	R2056	NRSA02J-820X	MG RESISTOR	82Ω,1/10W
	R2057	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2058	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
	R2059	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2060	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
	R2151	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R2152	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R2201	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2202	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2203	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2204	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2206	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
	R2207	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2208	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2209	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
	R2210	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2211	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
	R2212	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
	R2213	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2214	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2215	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
	R2216	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2217	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R2218	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
	R2219	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R2220	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
	R2221	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
	R2222	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R2223	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R2224	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
	R2225	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R2226	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R2227	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	R2228	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R2229	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
	R2230	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
	R2231	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
	R2236	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R2237	NRSA02J-511X	MG RESISTOR	510Ω,1/10W
	R2239	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R2240	NRSA02J-511X	MG RESISTOR	510Ω,1/10W
R2241	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R2242	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R2243	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R2244	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
R2251	NRSA02J-303X	MG RESISTOR	30kΩ,1/10W
R2252	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
R2254	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R2255	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R3011	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3012	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3013	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3014	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3015	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3016	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3017	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3018	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
R3019	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3020	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3021	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3022	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3025	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3026	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3027	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3029	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3030	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3031	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3033	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3034	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3035	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3036	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3037	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3038	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
R3039	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3040	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3041	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3042	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3044	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3046	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3047	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3048	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3049	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
R3050	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
R3051	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R3052	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R3053	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R3054	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3055	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3056	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3057	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3058	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3059	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3060	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R3061	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R3062	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R3063	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3066	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R3069	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R3071	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R3072	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3073	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R3074	NRSA02J-471X	MG RESISTOR	470Ω,1/10
R3075	NRSA02J-471X	MG RESISTOR	470Ω,1/10
R3076	NRSA02J-471X	MG RESISTOR	470Ω,1/10
R3077	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3078	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3079	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3080	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3081	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3083	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3085	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3086	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3087	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3088	NRSA02J-221X	MG RESISTOR	220Ω,1/10
R3089	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3090	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3091	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3092	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3093	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3094	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3095	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3096	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3097	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3103	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3104	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3105	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3106	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3201	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3202	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3203	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3204	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10
R3205	QRE141J-181Y	RESISTOR	180Ω,1/4
R3206	NRSA02J-183X	MG RESISTOR	18kΩ,1/10
R3207	NRSA02J-183X	MG RESISTOR	18kΩ,1/10
R3208	QRE141J-181Y	RESISTOR	180Ω,1/4
R3209	QRE141J-273Y	RESISTOR	27kΩ,1/4
R3210	NRSA02J-181X	MG RESISTOR	180Ω,1/10
R3211	NRSA02J-273X	MG RESISTOR	27kΩ,1/10
R3212	QRE141J-474Y	RESISTOR	470kΩ,1/4
R3213	NRSA02J-334X	MG RESISTOR	330kΩ,1/10
R3214	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3215	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3216	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3217	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10
R3218	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3219	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3220	NRSA02J-104X	MG RESISTOR	100kΩ,1/10
R3222	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3225	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3229	NRSA02J-105X	MG RESISTOR	1MΩ,1/10
R3230	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
R3231	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
R3233	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3234	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3235	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
R3236	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
R3237	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3238	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3239	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
R3240	NRSA02J-103X	MG RESISTOR	10kΩ,1/10

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R3241	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3242	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3244	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3251	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R4003	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R4004	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R4005	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R4006	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R4007	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4008	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4009	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4010	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4011	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R4012	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R4013	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4014	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R4015	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R4016	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4017	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4018	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4019	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4020	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4021	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5101	QRE141J-334Y	RESISTOR	330kΩ,1/4W
		R5102	QRE141J-334Y	RESISTOR	330kΩ,1/4W
		R5103	QRE141J-683Y	RESISTOR	68kΩ,1/4W
		R5104	QRG029J-154G	OMF RESISTOR	150kΩ,2W
		R5106	QRT01DJ-R39X	MF RESISTOR	0.39Ω,1W
		R5107	QRE121J-331Y	RESISTOR	330Ω,1/2W
		R5108	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R5109	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
		R5110	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
		R5111	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
		R5112	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
		R5301	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		R5302	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5303	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	⚠	R5304	QRZ9005-221X	FUSI RESISTOR	220Ω,1/4W
		R5305	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R5306	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R5307	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5310	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R5311	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R5312	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R5313	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R5314	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R5317	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R5318	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R5319	QRE141J-511Y	RESISTOR	510Ω,1/4W
		R5320	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5321	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R5322	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R5323	QRE141J-473Y	RESISTOR	47kΩ,1/4W
		R5324	QRE141J-102Y	RESISTOR	1kΩ,1/4W
		R5331	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6020	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6021	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6022	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6023	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6030	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6031	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R6032	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R6033	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W
		R6050	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6051	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6052	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6082	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R6508	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6510	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6553	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		R6554	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R7530	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		VR2251	QVP0039-473Z	TRIM RESISTOR,A.REC.FM	
		C1	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C3	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C5	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7	QETN1CM-107	E CAPACITOR	100μF,16V
		C9	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C11	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C12	NCB21EK-473X	CAPACITOR	0.047μF,25V
		C13	QERF1HM-335	E CAPACITOR	3.3μF,50V
		C14	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C16	NCF21CZ-105X	CAPACITOR	1μF,16V
		C18	NDC21HJ-180X	CAPACITOR	18pF,50V
		C19	NDC21HJ-470X	CAPACITOR	47pF,50V
		C20	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C21	NCB21CK-563X	CAPACITOR	0.056μF,16V
		C23	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C24	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C25	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C27	NDC21HJ-101X	CAPACITOR	100pF,50V
		C29	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C30	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C31	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C32	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C34	QFVF1HJ-104Z	F CAPACITOR	0.1μF,50V
		C37	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C38	NDC21HJ-100X	CAPACITOR	10pF,50V
		C39	NDC21HJ-220X	CAPACITOR	22pF,50V
		C41	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C42	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C43	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C45	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C46	NDC21HJ-101X	CAPACITOR	100pF,50V
		C47	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C48	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C49	NDC21HJ-221X	CAPACITOR	220pF,50V
		C54	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C55	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C56	QEKJ1HM-335	E CAPACITOR	3.3μF,50V
		C57	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C58	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C59	NCB21EK-473X	CAPACITOR	0.047μF,25V
		C61	NDC21HJ-120X	CAPACITOR	12pF,50V
		C62	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C63	NDC21HG-151X	CAPACITOR	150pF,50V
		C64	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C65	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C73	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C74	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C76	NDC21HJ-101X	CAPACITOR	100pF,50V
		C77	NDC21HJ-270X	CAPACITOR	27pF,50V
		C79	NDC21HJ-120X	CAPACITOR	12pF,50V
		C85	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C86	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C87	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C88	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C89	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C90	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C91	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C92	NDC21HJ-330X	CAPACITOR	33pF,50V
		C98	NCF21CZ-105X	CAPACITOR	1μF,16V
		C107	NDC21HJ-5R0X	CAPACITOR	5pF,50V
		C134	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C141	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C164	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C165	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C201	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C204	NDC21HJ-100X	CAPACITOR	10pF,50V
		C206	NDC21HJ-330X	CAPACITOR	33pF,50V
		C207	NDC21HJ-330X	CAPACITOR	33pF,50V
		C209	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C212	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C213	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C214	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C215	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C216	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C217	NDC21HJ-560X	CAPACITOR	56pF,50V
		C218	NCB21AK-105X	CAPACITOR	1μF,10V
		C222	NCB21AK-105X	CAPACITOR	1μF,10V
		C2002	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2003	NCB21HK-123X	CAPACITOR	0.012μF,50V
		C2004	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2005	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C2006	NCB21HK-331X	CAPACITOR	330pF,50V
		C2007	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2008	NCB21HK-152X	CAPACITOR	0.0015μF,50V
		C2009	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2010	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2011	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C2013	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C2015	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2016	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2051	NCB21HK-331X	CAPACITOR	330pF,50V
		C2052	QFLC1HJ-823Z	F CAPACITOR	0.082μF,50V
		C2053	NCB21HK-472X	CAPACITOR	0.0047μF,50V
		C2054	NCB21EK-223X	CAPACITOR	0.022μF,25V
		C2055	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2151	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2152	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2201	QEKJ1HM-104	E CAPACITOR	0.1μF,50V
		C2202	QEKJ1HM-104	E CAPACITOR	0.1μF,50V
		C2204	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2205	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2206	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2207	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C2208	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2209	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2210	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2211	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2212	QEKJ0JM-476	E CAPACITOR	47μF,6.3V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C2213	QERF0JM-476	E CAPACITOR	47μF,6.3
		C2214	NCB21HK-103X	CAPACITOR	0.01μF,50
		C2215	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2218	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2219	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2220	QEKJ1CM-476	E CAPACITOR	47μF,16
		C2221	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2222	QEKJ1CM-226	E CAPACITOR	22μF,16
		C2225	QEKJ1HM-224	E CAPACITOR	0.22μF,50
		C2226	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2227	QEKJ1CM-106	E CAPACITOR	10μF,16
		C2230	NCB21CK-473X	CAPACITOR	0.047μF,16
		C2231	NCB21HK-153X	CAPACITOR	0.015μF,50
		C2232	QEKJ1HM-224	E CAPACITOR	0.22μF,50
		C2233	NCB21HK-153X	CAPACITOR	0.015μF,50
		C2234	NCB21CK-473X	CAPACITOR	0.047μF,16
		C2251	NCB21EK-104X	CAPACITOR	0.1μF,25
		C2252	NCB21HK-222X	CAPACITOR	0.0022μF,50
		C2253	NCB21HK-222X	CAPACITOR	0.0022μF,50
		C2256	NCF21EZ-104X	CAPACITOR	0.1μF,25
		C2257	QERF0JM-476	E CAPACITOR	47μF,6.3
		C2258	NCB21EK-104X	CAPACITOR	0.1μF,25
		C2259	NCB21EK-104X	CAPACITOR	0.1μF,25
		C2260	NDC21HJ-181X	CAPACITOR	180pF,50
		C2261	NCB21HK-103X	CAPACITOR	0.01μF,50
		C3002	NCB21HK-103X	CAPACITOR	0.01μF,50
		C3003	QEKJ1HM-106	E CAPACITOR	10μF,50
		C3004	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3011	QETL0JM-478	E CAPACITOR	4700μF,6.3
		C3012	QEKJ0JM-107	E CAPACITOR	100μF,6.3
		C3013	NCB21HK-103X	CAPACITOR	0.01μF,50
		C3014	NBE20JM-226X	T CAPACITOR	22μF,6.3
		C3016	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3019	NDC21HJ-101X	CAPACITOR	100pF,50
		C3020	NDC21HJ-101X	CAPACITOR	100pF,50
		C3021	NDC21HJ-101X	CAPACITOR	100pF,50
		C3022	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3023	NBE20JM-106X	T CAPACITOR	10μF,6.3
		C3024	NDC21HJ-220X	CAPACITOR	22pF,50
		C3025	QAT3725-300Z	TRIM CAPACITOR,TIMER CLOCK	
		C3026	NCB21HK-103X	CAPACITOR	0.01μF,50
		C3027	NBE20JM-106X	T CAPACITOR	10μF,6.3
		C3028	NDC21HJ-101X	CAPACITOR	100pF,50
		C3029	NDC21HJ-101X	CAPACITOR	100pF,50
		C3030	NBE20JM-226X	T CAPACITOR	22μF,6.3
		C3031	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3032	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3033	NCB21EK-104X	CAPACITOR	0.1μF,25
		C3036	NDC21HJ-180X	CAPACITOR	18pF,50
		C3037	NDC21HJ-120X	CAPACITOR	12pF,50
		C3038	NDC21HJ-101X	CAPACITOR	100pF,50
		C3039	NDC21HJ-101X	CAPACITOR	100pF,50
		C3040	NCF21CZ-105X	CAPACITOR	1μF,1
		C4001	NBE20JM-226X	T CAPACITOR	22μF,6.3
		C4002	NCB21EK-104X	CAPACITOR	0.1μF,25
		C4003	NCB21HK-102X	CAPACITOR	0.001μF,50
		C4004	NBE20JM-226X	T CAPACITOR	22μF,6.3
		C4005	NCB21HK-222X	CAPACITOR	0.0022μF,50
		C4006	NBE40JM-476X	T CAPACITOR	47μF,6.3
		C4007	NCB21HK-561X	CAPACITOR	560pF,50
		C4008	NCB21AK-105X	CAPACITOR	1μF,1

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C4009	NCB21HK-563X	CAPACITOR	0.056μF,50V
	C4010	NCB21EK-223X	CAPACITOR	0.022μF,25V
	C4011	NCB21EK-104X	CAPACITOR	0.1μF,25V
	C4012	NCB21EK-224X	CAPACITOR	0.22μF,25V
	C4013	NCB21HK-563X	CAPACITOR	0.056μF,50V
	C4014	NDC21HJ-101X	CAPACITOR	100pF,50V
	C4015	NCB21HJ-102X	CAPACITOR	0.001μF,50V
⚠	C5001	QFZ9051-683	F CAPACITOR	0.068μF,250V
⚠	C5002	QFZ9051-333	F CAPACITOR	0.033μF,250V
⚠	C5005	QCZ9071-222	CAPACITOR	0.0022μF,250V
	C5006	QEZ0375-686	E CAPACITOR	68μF,400V
	C5101	QCZ0212-472	CAPACITOR	0.0047μF,1kV
	C5102	QCZ0302-330Z	CAPACITOR	33pF,1kV
	C5104	QETN1HM-105	E CAPACITOR	1μF,50V
	C5105	QFN31HJ-183	F CAPACITOR	0.018μF,50V
	C5106	QCBB1HJ-271	CAPACITOR	270pF,50V
	C5107	QFV91HJ-104	F CAPACITOR	0.1μF,50V
	C5110	QCZ0302-330Z	CAPACITOR	33pF,1kV
	C5201	QEMU0JM-227	E CAPACITOR	220μF,6.3V
	C5202	QEMT1CM-827	E CAPACITOR	820μF,16V
	C5203	QEMT1AM-158	E CAPACITOR	1500μF,10V
	C5204	QETN2AM-475	E CAPACITOR	4.7μF,100V
	C5205	QETN1HM-106	E CAPACITOR	10μF,50V
	C5207	QETN1CM-227	E CAPACITOR	220μF,16V
	C5208	QETN1AM-227	E CAPACITOR	220μF,10V
	C5301	QEMU0JM-227	E CAPACITOR	220μF,6.3V
	C5302	QEKC1CM-106	E CAPACITOR	10μF,16V
	C5303	QETN1CM-107	E CAPACITOR	100μF,16V
	C5304	QFLC1HJ-183Z	F CAPACITOR	0.018μF,50V
	C5305	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C5306	QETN1AM-107	E CAPACITOR	100μF,10V
	C5307	QETN1CM-226	E CAPACITOR	22μF,16V
	C5308	QETN1EM-476	E CAPACITOR	47μF,25V
	C5309	QETN1CM-107	E CAPACITOR	100μF,16V
	C5310	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C6006	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C6007	QETN1AM-337	E CAPACITOR	330μF,10V
	C6008	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C6012	QEKJ1CM-476	E CAPACITOR	47μF,16V
	C6013	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C6014	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C6016	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C6020	NDC21HJ-101X	CAPACITOR	100pF,50V
	C6021	NDC21HJ-101X	CAPACITOR	100pF,50V
	C6022	NDC21HJ-101X	CAPACITOR	100pF,50V
	C6032	NCB21HK-473X	CAPACITOR	0.047μF,50V
	C6033	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	C6037	QEKJ1HM-106	E CAPACITOR	10μF,50V
	C6055	NDC21HJ-220X	CAPACITOR	22pF,50V
	L1	QQL29BJ-100Z	COIL	10μH
	L2	QQL071J-100Y	COIL	10μH
	L3	QQL071J-6R8Y	COIL	6.8μH
	L4	QQL29BJ-100Z	COIL	10μH
	L5	QQL071J-680Y	COIL	68μH
	L6	QQL29BJ-101Z	COIL	100μH
	L7	QQL29BJ-100Z	COIL	10μH
	L8	QQL071J-680Y	COIL	68μH
	L9	QQL29BJ-100Z	COIL	10μH
	L12	QQL071J-330Y	COIL	33μH
	L13	QQL071J-120Y	COIL	12μH
	L14	QQL071J-101Y	COIL	100μH

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L16	QQL29BJ-100Z	COIL	10μH
	L18	QQR0967-001	COIL	10μH
	L201	QQL29BK-1R0Z	COIL	1μH
	L202	QQL071J-330Y	COIL	33μH
	L203	QQL071J-220Y	COIL	22μH
	L204	QQL29BJ-100Z	COIL	10μH
	L206	QQL071J-220Y	COIL	22μH
	L2251	QQL29BJ-100Z	COIL	10μH
	L2252	QQL29BJ-151Z	COIL	150μH
	L3011	NQL03BK-330X	COIL	33μH
	L3012	NQL03BK-330X	COIL	33μH
	L5201	PELN1184	COIL	33μH
	L5202	PU60944-330K	COIL	33μH
	L6002	QQL29BJ-100Z	COIL	10μH
	L6004	QQL29BJ-100Z	COIL	10μH
	L6031	QQL29BK-1R0Z	COIL	1μH
	X1	QAX0530-001	CRYSTAL RESONATOR	
	X3001	QAX0445-001	CRYSTAL RESONATOR	
	X3002	QAX0527-001	CRYSTAL RESONATOR	
	S3002	QSW0695-001	PUSH SWITCH	
	K5101	QQR0678-001Z	FERRITE BEAD	
	PC3001	GP3S123	IC(PHOTO SENSOR	
	PC3002	GP3S123	IC(PHOTO SENSOR	
⚠	PC5101	PC123F2	PH COUPLER	
⚠	PC5301	PS2501-1	PH COUPLER	
	T2051	PELN0832	OSC TRANSFORMER	
⚠	T5001	QQS0033-001	SW TRANSFORMER	
	TU6001	QAU0107-001	TUNER	
	ET1	PQ21623-1-5	EARTH PLATE(RF)	
	ET2	LP40547-001A	EARTH PLATE	
	SD1	LP30563-001B	SHIELD CASE(PRE/REC)	
⚠	HS1	LP40515-001A	HEAT SINK,Q5101	
	HS2	LP40479-001B	HEAT SINK,IC5301	
	OT1	QYTDSF3010Z	SCREW,X2 TERMINAL BOARD	
	OT2	QYTDST3008Z	SCREW,Q5101	
	OT3	QYTDST3006Z	SCREW,IC5301	
	FC5001	QNG0006-001Z	FUSE CLIP,F5001	
	FC5002	QNG0006-001Z	FUSE CLIP,F5001	
⚠	LF5001	PELN1204-01-01	LINE FILTER	
⚠	LF5002	QQR0608-001	LINE FILTER	
	CN1	QGF1028C1-11	FPC CONNECTOR,(1-11)U.DRUM	
	CN2001	QGF1207C1-07	FPC CONNECTOR,(1-7)A/C HEAD	
	CN2002	QGB2532J1-02	CONNECTOR,(1-2)FE HEAD	
	CN3001	QGF1207C1-05	FPC CONNECTOR,(1-5)DRUM MDA	
	CN3002	QGB2532J1-02	CONNECTOR,(1-2)L.MOTOR	
	CN3003	QGB2015M2-08	CONNECTOR,(1-8)CAP.MOTOR	
	CN3004	QGB2534J2-04	CONNECTOR,(1-4)ROTARY ENCODER	
	CN3011	QGF1207C1-14	FPC CONNECTOR,(1-14)FRONT	
⚠	CN5001	QGA7901C3-02	CONNECTOR,(1-2)AC IN	
	CN7501	QGB2024K1-09S	CONNECTOR,(1-9)TERMINAL	
	CN7502	QGB2024K1-10S	CONNECTOR,(1-10)TERMINAL	
	CN7503	QGB2024K1-10S	CONNECTOR,(1-10)TERMINAL	
⚠	CP4001	ICP-N15	CIRCUIT PROTECTOR	
⚠	CP5301	ICP-N38	CIRCUIT PROTECTOR	
⚠	CP5302	ICP-N25	CIRCUIT PROTECTOR	
⚠	F5001	QMF51E2-2R0J1	FUSE	T2.0A,AC250V

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2D SVHS BOARD ASSEMBLY <05>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		PW1	LPA10019-06A	2D SVHS BOARD ASSY	
		IC1001	JCP8008	IC	
		IC1002	VC2076DP	IC	
		IC1006	HA118092FP1	IC	
		IC1007	BA10358F-XE	IC	
		IC1201	JCP8013	IC	
		Q1005	UN521E	TRANSISTOR	
			or RN1309	TRANSISTOR	
			or DTC144WU	TRANSISTOR	
		Q1006	2SA1576A/QRS/-X	TRANSISTOR	
		Q1007	2SC4081/QRS/-X	TRANSISTOR	
		Q1012	2SD1819A/QRS/-X	TRANSISTOR	
			or 2SC4081/QRS/-X	TRANSISTOR	
			or 2PC4081/R/-X	TRANSISTOR	
		Q1014	2SC4081/QRS/-X	TRANSISTOR	
		Q1015	2SC4081/QRS/-X	TRANSISTOR	
		Q1016	UN521E	TRANSISTOR	
			or RN1309	TRANSISTOR	
			or DTC144WU	TRANSISTOR	
		Q1201	2SC4081/QRS/-X	TRANSISTOR	
		Q1202	2SC4081/QRS/-X	TRANSISTOR	
		Q1203	UN521E	TRANSISTOR	
			or DTC144WU	TRANSISTOR	
			or RN1309	TRANSISTOR	
		Q1205	2SC4081/QRS/-X	TRANSISTOR	
		Q1206	2SC4081/QRS/-X	TRANSISTOR	
		Q1207	2SA1576A/QRS/-X	TRANSISTOR	
		Q1208	2SC4081/QRS/-X	TRANSISTOR	
		Q1209	2SC4081/QRS/-X	TRANSISTOR	
		Q1210	2SC4081/QRS/-X	TRANSISTOR	
		Q1211	UN521E	TRANSISTOR	
			or RN1309	TRANSISTOR	
			or DTC144WU	TRANSISTOR	
		Q1212	2SB1218A/QR/-X	TRANSISTOR	
			or 2PA1576/R/-X	TRANSISTOR	
			or 2SA1576A/QR/-X	TRANSISTOR	
		Q1213	2SA1576A/QRS/-X	TRANSISTOR	
		Q1215	2SD1819A/QRS/-X	TRANSISTOR	
			or 2PC4081/R/-X	TRANSISTOR	
			or 2SC4081/QRS/-X	TRANSISTOR	
		Q1216	UN521E	TRANSISTOR	
			or RN1309	TRANSISTOR	
			or DTC144WU	TRANSISTOR	
		Q1217	2SC4081/QRS/-X	TRANSISTOR	
		Q1218	2SA1576A/QRS/-X	TRANSISTOR	
		Q1219	2SA1576A/QRS/-X	TRANSISTOR	
		Q1221	2SD1819A/QRS/-X	TRANSISTOR	
			or 2PC4081/R/-X	TRANSISTOR	
			or 2SC4081/QRS/-X	TRANSISTOR	
		D1002	1SS133	DIODE	
			or 1N4148M	DIODE	
		D1003	DAN202U	DIODE	
		D1006	1SS133	DIODE	
			or 1N4148M	DIODE	
		D1203	DAP202U	DIODE	
		D1204	DAN202U	DIODE	
		R1002	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R1003	NRSA02J-221X	MG RESISTOR	220Ω,1/10
		R1004	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10
		R1006	NRSA02J-823X	MG RESISTOR	82kΩ,1/10
		R1009	NRSA02J-155X	MG RESISTOR	1.5MΩ,1/10
		R1010	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10
		R1011	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10
		R1012	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10
		R1013	NRVA02D-471X	CMF RESISTOR	470Ω,1/10
		R1014	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10
		R1015	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10
		R1016	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10
		R1017	NRSA02J-162X	MG RESISTOR	1.6kΩ,1/10
		R1018	NRSA02J-151X	MG RESISTOR	150Ω,1/10
		R1019	NRSA02J-391X	MG RESISTOR	390Ω,1/10
		R1020	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
		R1021	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
		R1025	NRSA02J-823X	MG RESISTOR	82kΩ,1/10
		R1026	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
		R1027	NRSA02J-561X	MG RESISTOR	560Ω,1/10
		R1028	NRSA02J-561X	MG RESISTOR	560Ω,1/10
		R1029	NRSA02J-473X	MG RESISTOR	47kΩ,1/10
		R1030	NRSA02J-473X	MG RESISTOR	47kΩ,1/10
		R1031	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10
		R1032	NRSA02J-181X	MG RESISTOR	180Ω,1/10
		R1035	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10
		R1037	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10
		R1038	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
		R1039	NRSA02J-394X	MG RESISTOR	390kΩ,1/10
		R1045	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10
		R1046	NRSA02J-273X	MG RESISTOR	27kΩ,1/10
		R1047	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
		R1048	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
		R1053	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
		R1054	NRSA02J-221X	MG RESISTOR	220Ω,1/10
		R1055	NRVA02D-563X	CMF RESISTOR	56kΩ,1/10
		R1056	NRVA02D-224X	CMF RESISTOR	220kΩ,1/10
		R1058	NRSA02J-273X	MG RESISTOR	27kΩ,1/10
		R1059	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10
		R1060	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10
		R1063	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10
		R1064	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
		R1065	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10
		R1066	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10
		R1067	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
		R1068	NRSA02J-361X	MG RESISTOR	360Ω,1/10
		R1069	NRSA02J-102X	MG RESISTOR	1kΩ,1/10
		R1201	NRSA02J-133X	MG RESISTOR	13kΩ,1/10
		R1202	NRSA02J-223X	MG RESISTOR	22kΩ,1/10
		R1203	NRSA02J-681X	MG RESISTOR	680Ω,1/10
		R1204	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10
		R1205	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10
		R1206	NRSA02J-101X	MG RESISTOR	100Ω,1/10
		R1207	NRSA02J-101X	MG RESISTOR	100Ω,1/10
		R1208	NRSA02J-471X	MG RESISTOR	470Ω,1/10
		R1209	NRSA02J-153X	MG RESISTOR	15kΩ,1/10
		R1210	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10
		R1211	NRSA02J-821X	MG RESISTOR	820Ω,1/10
		R1212	NRSA02J-331X	MG RESISTOR	330Ω,1/10
		R1213	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
		R1216	NRSA02J-103X	MG RESISTOR	10kΩ,1/10
		R1218	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R1219	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R1220	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R1223	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R1225	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R1226	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
R1227	NRSA02J-180X	MG RESISTOR	18Ω,1/10W
R1228	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
R1229	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R1230	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1231	NRSA02J-121X	MG RESISTOR	120Ω,1/10W
R1232	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
R1233	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
R1234	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
R1235	NRSA02J-391X	MG RESISTOR	390Ω,1/10W
R1236	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1237	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
R1238	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
R1239	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
R1240	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
R1242	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
R1243	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
R1244	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
R1245	NRSA02J-470X	MG RESISTOR	47Ω,1/10W
R1246	NRSA02J-151X	MG RESISTOR	150Ω,1/10W
R1247	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1248	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
R1249	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
R1250	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1251	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1253	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1255	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R1256	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
R1257	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R1259	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
R1260	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R1261	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
R1262	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
R1263	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R1264	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
R1265	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
VR1001	QRE141J-0R0	RESISTOR	0Ω,1/4W
VR1002	QVZ3521-104Z	V RESISTOR,P.BURST LEVEL	
VR1201	QVP0039-103Z	TRIM RESISTOR,D/A LEVEL	
C1001	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
C1002	QEKJ1HM-474	E CAPACITOR	0.47μF,50V
C1003	QEKJ1CM-106	E CAPACITOR	10μF,16V
C1005	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
C1006	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1007	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1008	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1010	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1011	NDC21HJ-150X	CAPACITOR	15pF,50V
C1013	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1014	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1015	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
C1016	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1017	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1019	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1020	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1021	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1022	QEKJ1HM-105	E CAPACITOR	1μF,50V
C1023	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1024	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1026	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1027	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1028	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
C1029	QEKJ1HM-104	E CAPACITOR	0.1μF,50V
C1030	QEPF1HM-105	E CAPACITOR	1μF,50V
C1031	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1033	QEKJ1HM-105	E CAPACITOR	1μF,50V
C1034	QEPF1HM-105	NP E CAPACITOR	1μF,50V
C1035	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
C1036	QEKJ0JM-226	E CAPACITOR	22μF,6.3V
C1037	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1038	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C1039	QEKJ1CM-476	E CAPACITOR	47μF,16V
C1040	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1041	NDC21HG-301X	CAPACITOR	300pF,50V
C1042	NDC21HG-301X	CAPACITOR	300pF,50V
C1043	NDC21HG-221X	CAPACITOR	220pF,50V
C1044	NDC21HG-820X	CAPACITOR	82pF,50V
C1045	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1046	NDC21HG-271X	CAPACITOR	270pF,50V
C1047	NDC21HJ-101X	CAPACITOR	100pF,50V
C1048	NDC21HJ-181X	CAPACITOR	180pF,50V
C1049	NDC21HG-301X	CAPACITOR	300pF,50V
C1050	NDC21HG-301X	CAPACITOR	300pF,50V
C1056	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1057	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1058	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1063	NDC21HJ-101X	CAPACITOR	100pF,50V
C1064	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1065	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
C1066	NCB21EK-223X	CAPACITOR	0.022μF,25V
C1067	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1068	QEKJ1HM-105	E CAPACITOR	1μF,50V
C1069	QEKJ1CM-106	E CAPACITOR	10μF,16V
C1070	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1071	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1072	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1073	NDC21HJ-150X	CAPACITOR	15pF,50V
C1074	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1082	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1086	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1087	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1088	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1089	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1092	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1201	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
C1202	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1203	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1204	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1205	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1206	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1207	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1208	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1209	NCF21CZ-105X	CAPACITOR	1μF,16V
C1210	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1211	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
C1212	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1213	NCB21EK-473X	CAPACITOR	0.047μF,25V
C1214	NCB21HK-103X	CAPACITOR	0.01μF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C1215	NCB21HK-102X	CAPACITOR	0.001μF,50V
C1216	NCF21CZ-105X	CAPACITOR	1μF,16V
C1217	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1218	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
C1219	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1220	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1221	QEKJ1HM-335	E CAPACITOR	3.3μF,50V
C1222	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1223	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1224	NDC21HJ-390X	CAPACITOR	39pF,50V
C1225	NDC21HJ-220X	CAPACITOR	22pF,50V
C1226	NDC21HJ-6R0X	CAPACITOR	6pF,50V
C1227	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1228	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1229	NDC21HJ-470X	CAPACITOR	47pF,50V
C1230	NDC21HJ-8R0X	CAPACITOR	8pF,50V
C1231	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1232	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1233	NDC21HJ-680X	CAPACITOR	68pF,50V
C1234	NDC21HJ-391X	CAPACITOR	390pF,50V
C1235	NDC21HJ-100X	CAPACITOR	10pF,50V
C1236	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1237	NDC21HJ-221X	CAPACITOR	220pF,50V
C1238	NCB21HK-103X	CAPACITOR	0.01μF,50V
C1239	NDC21HJ-470X	CAPACITOR	47pF,50V
C1240	NDC21HJ-470X	CAPACITOR	47pF,50V
C1242	NDC21HJ-470X	CAPACITOR	47pF,50V
C1244	NDC21HJ-470X	CAPACITOR	47pF,50V
C1246	NDC21HJ-470X	CAPACITOR	47pF,50V
C1247	NDC21HJ-470X	CAPACITOR	47pF,50V
C1248	NDC21HJ-470X	CAPACITOR	47pF,50V
C1249	NDC21HJ-470X	CAPACITOR	47pF,50V
C1250	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1251	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1252	NCF21EZ-104X	CAPACITOR	0.1μF,25V
C1253	NDC21HJ-330X	CAPACITOR	33pF,50V
L1001	QQL29BJ-220Z	COIL	22μH
L1004	QQL071J-680Y	COIL	68μH
L1006	QQL29BJ-101Z	COIL	100μH
L1008	QQL29BJ-100Z	COIL	10μH
L1201	QQL29BJ-101Z	COIL	100μH
L1202	QQL29BJ-101Z	COIL	100μH
L1203	QQL29BJ-101Z	COIL	100μH
L1204	QQL071J-330Y	COIL	33μH
L1205	QQL071J-150Y	COIL	15μH
L1206	QQL071J-100Y	COIL	10μH
L1207	QQL071J-100Y	COIL	10μH
L1209	QQL231J-1R0Y	COIL	1μH
LC1201	QQR0657-013Z	NOISE FILTER	
SD1	LP30564-001A	SHIELD CASE(S-VHS)	
SD2	LP30406-001A	SHIELD PLATE(S-VHS)	
BK1	LP40077-001A	BRACKET(BOARD)	
CN1001	QGG2503K2-20	HEADER PIN	
CN1002	QGG2503K2-30	HEADER PIN	
CN1003	QGF1217F1-07	FPC CONNECTOR,(1-7)	

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	

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TERMINAL BOARD ASSEMBLY <06>

PW1	LPA10055-11A	TERMINAL BOARD ASSY	
IC7101	BH7635S	IC	
IC7102	MM1231XF	IC	
Q7102	2SB1218A/QR/-X	TRANSISTOR	
	or 2PA1576/R/-X	TRANSISTOR	
	or 2SA1576A/QR/-X	TRANSISTOR	
Q7103	2SB1218A/QR/-X	TRANSISTOR	
	or 2SA1576A/QR/-X	TRANSISTOR	
	or 2PA1576/R/-X	TRANSISTOR	
Q7104	2SB1218A/QR/-X	TRANSISTOR	
	or 2SA1576A/QR/-X	TRANSISTOR	
	or 2PA1576/R/-X	TRANSISTOR	
Q7107	2SB1218A/QR/-X	TRANSISTOR	
	or 2SA1576A/QR/-X	TRANSISTOR	
	or 2PA1576/R/-X	TRANSISTOR	
Q7108	2SD1819A/QRS/-X	TRANSISTOR	
	or 2PC4081/R/-X	TRANSISTOR	
	or 2SC4081/QRS/-X	TRANSISTOR	
Q7109	2SD1819A/QRS/-X	TRANSISTOR	
	or 2SC4081/QRS/-X	TRANSISTOR	
	or 2PC4081/R/-X	TRANSISTOR	
Q7110	2SD1819A/QRS/-X	TRANSISTOR	
	or 2PC4081/R/-X	TRANSISTOR	
	or 2SC4081/QRS/-X	TRANSISTOR	
Q7111	UN5211	TRANSISTOR	
	or PDTC114EU	TRANSISTOR	
	or RN1302	TRANSISTOR	
	or DTC114EU	TRANSISTOR	
Q7112	2SD1819A/QRS/-X	TRANSISTOR	
	or 2SC4081/QRS/-X	TRANSISTOR	
	or 2PC4081/R/-X	TRANSISTOR	
R7104	NRSA02J-750X	MG RESISTOR	75Ω,1/1
R7105	NRSA02J-750X	MG RESISTOR	75Ω,1/1
R7106	NRSA02J-750X	MG RESISTOR	75Ω,1/1
R7107	NRSA02J-750X	MG RESISTOR	75Ω,1/1
R7108	QRE123J-391X	RESISTOR	390Ω,1/
R7109	NRSA02J-0R0X	MG RESISTOR	0Ω,1/1
R7110	QRE123J-391X	RESISTOR	390Ω,1/
R7111	NRSA02J-101X	MG RESISTOR	100Ω,1/1
R7112	NRSA02J-181X	MG RESISTOR	180Ω,1/1
R7113	NRSA02J-431X	MG RESISTOR	430Ω,1/1
R7114	NRSA02J-471X	MG RESISTOR	470Ω,1/1
R7116	NRSA02J-0R0X	MG RESISTOR	0Ω,1/1
R7117	NRSA02J-0R0X	MG RESISTOR	0Ω,1/1
R7121	NRSA02J-750X	MG RESISTOR	75Ω,1/1
R7123	NRSA02J-101X	MG RESISTOR	100Ω,1/1
R7124	NRSA02J-101X	MG RESISTOR	100Ω,1/1
R7125	NRSA02J-101X	MG RESISTOR	100Ω,1/1
R7126	NRSA02J-101X	MG RESISTOR	100Ω,1/1
R7127	QRE141J-750Y	RESISTOR	75Ω,1/
R7128	QRE141J-103Y	RESISTOR	10kΩ,1/
R7129	NRSA02J-103X	MG RESISTOR	10kΩ,1/1
R7130	NRSA02J-221X	MG RESISTOR	220Ω,1/1
R7131	QRE123J-391X	RESISTOR	390Ω,1/
R7132	NRSA02J-680X	MG RESISTOR	68Ω,1/1
R7133	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/1
R7134	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/1

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R7135	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R7136	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
R7137	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R7138	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
R7139	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
R7140	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
R7141	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R7142	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R7143	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
R7144	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
R7145	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R7146	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R7147	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
R7149	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
R7152	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R7157	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R7160	QRE141J-101Y	RESISTOR	100Ω,1/4W
R7161	QRE141J-101Y	RESISTOR	100Ω,1/4W
R7162	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
C7102	QETJ0JM-477	E CAPACITOR	470µF,6.3V
C7103	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7104	QEKJ1CM-476	E CAPACITOR	47µF,16V
C7105	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7106	NCB21HK-223X	CAPACITOR	0.022µF,50V
C7108	NCB21HK-223X	CAPACITOR	0.022µF,50V
C7109	QEKJ1CM-476	E CAPACITOR	47µF,16V
C7110	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7112	NDC21HJ-330X	CAPACITOR	33pF,50V
C7113	NCB21HK-223X	CAPACITOR	0.022µF,50V
C7114	NCB21HK-223X	CAPACITOR	0.022µF,50V
C7115	NCB21HK-681X	CAPACITOR	680pF,50V
C7116	NCB21HK-681X	CAPACITOR	680pF,50V
C7119	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7120	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7124	QEKJ1CM-476	E CAPACITOR	47µF,16V
C7125	QEKJ1CM-476	E CAPACITOR	47µF,16V
C7126	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
C7127	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7128	NCB21HK-681X	CAPACITOR	680pF,50V
C7129	NCB21HK-681X	CAPACITOR	680pF,50V
C7133	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7134	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7137	QEKJ1CM-107	E CAPACITOR	100µF,16V
C7138	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7139	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7140	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7142	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7143	QEKJ1CM-106	E CAPACITOR	10µF,16V
C7144	NCB21HK-103X	CAPACITOR	0.01µF,50V
C7146	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
C7147	QEKJ1CM-106	E CAPACITOR	10µF,16V
C7148	NDC21HJ-101X	CAPACITOR	100pF,50V
C7150	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7152	NCB21HK-102X	CAPACITOR	0.001µF,50V
C7154	NCB21HK-681X	CAPACITOR	680pF,50V
C7156	NCB21HK-681X	CAPACITOR	680pF,50V
C7158	NDC21HJ-470X	CAPACITOR	47pF,50V
C7161	QEKJ1CM-476	E CAPACITOR	47µF,16V
L7105	QQL231J-1R0Y	COIL	1µH
L7107	QQL231J-R22Y	COIL	0.22µH
L7108	QQL231J-4R7Y	COIL	4.7µH

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L7109	QQL231J-4R7Y	COIL	4.7µH
L7110	QQL231J-4R7Y	COIL	4.7µH
L7111	QQL231J-4R7Y	COIL	4.7µH
L7112	QQL231J-1R0Y	COIL	1µH
L7113	QQL231J-4R7Y	COIL	4.7µH
L7114	QQL231J-4R7Y	COIL	4.7µH
L7115	QQL231J-4R7Y	COIL	4.7µH
L7116	QQL231J-4R7Y	COIL	4.7µH
L7121	QQL231J-4R7Y	COIL	4.7µH
L7123	QQL231J-4R7Y	COIL	4.7µH
L7124	QQL231J-4R7Y	COIL	4.7µH
L7125	QQL231J-4R7Y	COIL	4.7µH
SW7101	QSW0693-001	SLIDE SWITCH	
ET1	PQ21987-1-1	EARTH PLATE(TERMINAL)	
⚠ TB1	LP30562-006A	TERMINAL BOARD ASSY	
OT1	QYTDSF3008Z	SCREW,X8	
J7101	PEMC1177	RGB21PIN SOCKET,AV1	
J7102	PEMC1177	RGB21PIN SOCKET,AV2	
J7103	QNN0023-002	PIN JACK,A.OUT(R)	
J7104	QNN0023-003	PIN JACK,A.OUT(L)	
J7106	QND0009-001	S JACK,S IN	
J7107	QND0009-001	S JACK,S OUT	
J7111	QNN0022-002	PIN JACK,A.IN(R)	
J7112	QNN0022-003	PIN JACK,A.IN(L)	
CN7101	QGB2024J1-09S	CONNECTOR,(1-9)MAIN	
CN7102	QGB2024J1-10S	CONNECTOR,(1-10)MAIN	
CN7103	QGB2024J1-10S	CONNECTOR,(1-10)MAIN	
CN7104	QGF1208F1-07	FPC CONNECTOR,(1-7)	

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AUDIO CONTROL HEAD BOARD ASSEMBLY <12>

PW1	LPA10010-01A1	A/C HEAD BOARD ASSY
CN1	QGF1208F1-07	FPC CONNECTOR

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DEMOD BOARD ASSEMBLY <14>

PW1	LPA10021-03B	DEMOD BOARD ASSY
IC6701	MSP34VCD	IC
	or MSP3415D	IC
Q6701	2SC3068	TRANSISTOR
Q6702	2SC3354/TS/-T	TRANSISTOR
Q6704	DTC114EU	TRANSISTOR
	or UN5211	TRANSISTOR
	or PDTC114EU	TRANSISTOR
Q6705	DTC114EU	TRANSISTOR
	or UN5211	TRANSISTOR
	or PDTC114EU	TRANSISTOR
D6702	MTZJ9.1B	ZENER DIODE
D6703	1N4148M	DIODE
	or 1SS133	DIODE
D6704	1N4148M	DIODE

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
			or 1SS133	DIODE	
		R6701	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6702	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6703	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R6704	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6705	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R6706	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R6707	NRSA02J-470X	MG RESISTOR	47Ω,1/10W
		R6708	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6709	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R6710	NRSA02J-151X	MG RESISTOR	150Ω,1/10W
		R6712	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6713	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R6714	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6715	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R6716	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6717	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R6718	NRSA02J-684X	MG RESISTOR	680kΩ,1/10W
		C6703	QEKJ1CM-336	E CAPACITOR	33μF,16V
		C6704	QEKJ1CM-107	E CAPACITOR	100μF,16V
		C6705	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6706	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C6707	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6708	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6709	QEKJ1CM-336	E CAPACITOR	33μF,16V
		C6710	NCB21HK-682X	CAPACITOR	0.0068μF,50V
		C6711	NCB21HK-682X	CAPACITOR	0.0068μF,50V
		C6712	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C6713	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C6714	NCF21CZ-224X	CAPACITOR	0.22μF,16V
		C6717	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C6718	QEKJ1CM-336	E CAPACITOR	33μF,16V
		C6719	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C6720	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C6721	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6722	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C6723	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6727	NDC21HJ-470X	CAPACITOR	47pF,50V
		C6728	NDC21HJ-470X	CAPACITOR	47pF,50V
		C6729	NDC21HJ-8R0X	CAPACITOR	8pF,50V
		C6730	NDC21HJ-1R0X	CAPACITOR	1pF,50V
		L6701	QQL29BK-1R0Z	COIL	1μH
		L6702	QQL29BJ-3R3Z	COIL	3.3μH
		L6703	QQL231J-390Y	COIL	39μH
		L6704	QQL29BK-1R0Z	COIL	1μH
		L6705	QQL231J-100Y	COIL	10μH
		LC6701	QQR0657-013	NOISE FILTER	
		X6701	QAX0443-001	CRYSTAL RESONATOR	
		BK1	LP40077-001A	BRACKET(BOARD)	
		CN6701	QGG2502K1-11	HEADER PIN(1-11)	

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SW/DISPLAY BOARD ASSEMBLY <28>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		PW1	LPA10054-09B1	DISPLAY BOARD ASSY	
		IC7001	M35500BGP	IC	
			or M35500BFP	IC	
			or M35500AGP	IC	
		IC7002	PNA4652M00XB	IR DETECT UNIT	
			or GP1U281X	IR DETECT UNIT	
		D7002	RD9.1ES/B2/-T2	ZENER DIODE	
			or UZ9.1BSB	ZENER DIODE	
			or MTZJ9.1B	ZENER DIODE	
		D7005	1SS133	DIODE	
		D7010	SLR-342VC3F	LE DIODE	
		R7001	QRE141J-471Y	RESISTOR	470Ω,1/4
		R7002	QRE141J-471Y	RESISTOR	470Ω,1/4
		R7003	QRE141J-471Y	RESISTOR	470Ω,1/4
		R7004	QRE141J-471Y	RESISTOR	470Ω,1/4
		R7005	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7006	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7007	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7008	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7013	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7020	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7021	QRE141J-122Y	RESISTOR	1.2kΩ,1/4
		R7022	QRE141J-182Y	RESISTOR	1.8kΩ,1/4
		R7023	QRE141J-222Y	RESISTOR	2.2kΩ,1/4
		R7024	QRE141J-272Y	RESISTOR	2.7kΩ,1/4
		R7025	QRE141J-472Y	RESISTOR	4.7kΩ,1/4
		R7026	QRE141J-682Y	RESISTOR	6.8kΩ,1/4
		R7027	QRE141J-153Y	RESISTOR	15kΩ,1/4
		R7028	QRE141J-393Y	RESISTOR	39kΩ,1/4
		R7030	QRE141J-103Y	RESISTOR	10kΩ,1/4
		R7031	QRE141J-122Y	RESISTOR	1.2kΩ,1/4
		R7032	QRE141J-182Y	RESISTOR	1.8kΩ,1/4
		R7033	QRE141J-222Y	RESISTOR	2.2kΩ,1/4
		R7034	QRE141J-272Y	RESISTOR	2.7kΩ,1/4
		R7035	QRE141J-472Y	RESISTOR	4.7kΩ,1/4
		R7036	QRE141J-682Y	RESISTOR	6.8kΩ,1/4
		R7037	QRE141J-153Y	RESISTOR	15kΩ,1/4
		R7038	QRE141J-393Y	RESISTOR	39kΩ,1/4
		R7041	QRE141J-331Y	RESISTOR	330Ω,1/4
		C7001	QCFB1HZ-104	CAPACITOR	0.1μF,5
		C7002	QETC1HM-106	E CAPACITOR	10μF,5
		C7007	QETN1HM-476	E CAPACITOR	47μF,5
		C7009	QCSB1HJ-150	CAPACITOR	15pF,5
		C7010	QCFB1HZ-104	CAPACITOR	0.1μF,5
		C7011	QETN1AM-227	E CAPACITOR	220μF,1
		C7019	QDVB1EZ-223Y	CAPACITOR	0.022μF,2
		L7196	QQL231J-1R0Y	COIL	1
		S7001	QSW0456-002Z	TACT SWITCH,POWER	
		S7002	QSW0456-002Z	TACT SWITCH,CH+	
		S7003	QSW0456-002Z	TACT SWITCH,CH-	
		S7004	QSW0456-002Z	TACT SWITCH,REC	
		S7005	QSW0456-002Z	TACT SWITCH,PAUSE	
		S7006	QSW0456-002Z	TACT SWITCH,PLAY	
		S7007	QSW0456-002Z	TACT SWITCH,STOP/EJECT	
		S7008	QSW0456-002Z	TACT SWITCH,FF	
		S7009	QSW0456-002Z	TACT SWITCH,REW	
		S7010	QSW0456-002Z	TACT SWITCH,TIMER	
		S7011	QSW0456-002Z	TACT SWITCH,REVIEW	
		S7012	QSW0456-002Z	TACT SWITCH,C.RESET	
		S7013	QSW0456-002Z	TACT SWITCH,REC LINK	
		S7014	QSW0456-002Z	TACT SWITCH,SP/LP	
		S7015	QSW0456-002Z	TACT SWITCH,DISPLAY	
		S7016	QSW0456-002Z	TACT SWITCH,P.JOG-	
		S7017	QSW0456-002Z	TACT SWITCH,P.JOG+	

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
DI7001	QLF0031-002	FL TUBE	
HD1	LP30140-001A	FDP HOLDER L,DI7001	
HD2	LP30141-001A	FDP HOLDER R,DI7001	
HD4	PQM30038-7	LED HOLDER,D7010	
CN7001	QGF1207C1-14	FPC CONNECTOR,(1-14)MAIN	

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REC SAFETY BOARD ASSEMBLY <32>

PW2	LPA10054-01C2	REC SAFETY BOARD ASSY	
S7041	QSW0602-003	PUSH SWITCH	
FW7001	QUM032-07A4A4	PARA RIBON WIRE	

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LOADING MOTOR BOARD ASSEMBLY <55>

PW2	LPA10010-01A2	LOADING MOTOR BOARD ASSY	
C1	QFV61HJ-104	F CAPACITOR	0.1μF,50V
OT1	PU59915-105	#500SPACER0.01,C1	
CN1	QGB2533K1-02	CONNECTOR	

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION

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